INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

October 1996

SAP America, Inc.

CEO: Paul Wahl
President: Jeremy Coote
701 Lee Road
Suite 200
Wayne, PA 19087
Phone: (610) 725-4500
Fax: (610) 725-4910
Internet: http://www.sap.com

Status:	Subsidiary
Parent	SAP AG
Employees:	1,800 (10/96)
Revenue:	$566,000,000
Fiscal Year End:	12/31/95

Key Points

- SAP America is the largest of SAP AG's international subsidiaries. SAP AG, a global leader in flexible, integrated business applications software, offers two product lines—the open client/server-based R/3 system and the mainframe-based R/2 system.
- In January 1996, Paul Wahl, a member of the SAP AG executive board, was appointed CEO of SAP America following the departure of Klaus Besier, CEO and president of SAP America for three years. Mr. Besier left SAP America to pursue other interests.
- Jeremy Coote, formerly executive vice president, was named President of SAP America effective February 1996.
- R/3 Release 4.0, scheduled for availability in 1997, will provide enhancements for market-driven global supply chain management, new retail and public sector industry solutions, and will deliver new components of the Business Framework architecture.

© INPUT 1996 Reproduction prohibited

All brand names and product names are acknowledged to be trademarks or registered trademarks of their owners.

- In June 1996, SAP America announced a new organizational structure aligned along major lines of business to focus efforts in customer service and implementation support, training, sales and marketing, and vertical industries.

- In August 1996, SAP America announced a new implementation methodology called AcceleratedSAP (ASAP) and expanded R/3 implementation services to help address the demand for support within its fast-growing National Accounts segment—midsized companies with revenues between $200 million and $2.5 billion.

- SAP America's revenue has grown at an average annual growth rate of nearly 84% over the past five years, with 1995 revenues reaching $566 million and the number of North American product installations rising to more than 1,230.

Company Description

SAP America, Inc. markets and supports the mainframe-based R/2 system and the client/server-based R/3 system—fully integrated enterprise-wide applications software systems designed to integrate the information needs of Fortune 2000 companies.

- SAP America operates as a wholly owned subsidiary of SAP AG.

- SAP America was originally established in January 1988 to market the R/2 system in the U.S.

SAP AG was founded in 1972 in Walldorf (Germany) by four former IBM engineers to develop standard applications software.

- SAP AG's mainframe-based R/2 system was released in 1979.

- In 1992, SAP AG delivered its client/server-based R/3 system three months ahead of schedule—effectively beating key competitors to market in the client/server computing environment.

- SAP AG's 1995 revenues reached $1.89 billion ($ U.S.), up significantly over 1994 revenue of $1.13 billion.

- SAP AG currently has more than 7,800 employees at offices in more than 40 countries worldwide and more than 6,000 customers in more than 50 countries.

Organization and Structure

In June 1996, SAP America announced a new organizational structure that continues the company's transition from a client/server software vendor to a global provider of enterprise solutions.

SAP America's new organization consolidates its four U.S. geographic regions (Northeast, Southern, Midwest, and Western) into one integrated organization to provide flexibility and increased resources for existing and new customers.

The Industry Marketing group, headed by Jane Biddle, concentrates on the specific needs of customers in the following industries: discrete manufacturing (automotive and high technology), process manufacturing (chemical/pharmaceutical and oil and gas), consumer goods, utilities, and telecommunications. This group manages industry programs, events, and marketing services for each industry branch.

The Emerging Markets organization, led by VP Jim Soenksen, concentrates on building infrastructure to enhance SAP's presence in three key industries: financial services, health care, and the public sector.

© INPUT 1996 Reproduction prohibited.

The SAP Professional Services Organization, headed by VP Eileen Basho, has been expanded, refocused, and realigned to address the increasing needs of SAP customers to implement R/3 rapidly.

SAP America also realigned its four formerly distinct geographic sales regions, consolidating efforts into global and national accounts.

- EVP Peter Dunning leads the Global Accounts sales division, concentrating on large multinational organizations.
- The National Accounts group, led by VPs Bob Salvucci and Mike Tolbert, focuses on medium-sized companies with revenues between $200 million and $2.5 billion.

Headquartered in Wayne (PA), SAP America has U.S. offices in Atlanta (GA), Boston (MA), Chicago (IL), Cincinnati and Cleveland (OH), Dallas and Houston (TX), Denver (CO), Foster City and Newport Beach (CA), Minneapolis (MN), Parsipanny (NJ), Philadelphia and Pittsburgh (PA), Seattle (WA), and St. Louis (MO).

SAP America also has a Development Center in Foster City (CA).

The following wholly owned subsidiaries report to SAP America:

- SAP Canada is headquartered in Toronto (Ontario). District offices are in Vancouver, Calgary, Ottawa, and Montreal.
- SAP Mexico is headquartered in Mexico City. Additional offices are in Buenos Aires (Argentina) and Sao Paulo (Brazil).
- SAP Australia has regional/district offices in Sidney and Melbourne.

Company Strategy

The company's corporate mission is to "provide high-quality software technology and support services that allow organizations to quickly, easily, and cost effectively support their existing and emerging business needs."

SAP America is committed to the business applications arena and to understanding the challenges facing businesses in implementing enterprise technology solutions. Elements of SAP America's strategy include:

- Continuing to promote and enhance R/3 client/server offerings, including significant investments in research and development
- Targeting and expanding within specific vertical markets through its Industry Centers of Expertise program to speed implementations and provide specific solutions for target industries
- Extending market coverage to small and medium-sized organizations
- Working closely with partners to help implement and support its products
- Expanding geographically to support customers on a local basis

The Business Framework is SAP's strategic product architecture for next-generation business solutions.

- It provides an agile business infrastructure that can respond quickly to new business demands and can be easily changed or expanded without disrupting the course of business.
- The building blocks of the new architecture include independent business components, integration technologies, and open interfaces, which collectively provide an

© INPUT 1996 Reproduction prohibited.

agile, standards-based environment through which R/3 and third-party software components will dynamically interoperate.

- The Business Framework will allow customers to:
 - Reduce the time required to deploy and continuously improve business processes over time
 - Dynamically reconfigure live R/3 systems without disruption of business
 - Improve system maintainability by using components on different release cycles
 - Reduce total ownership costs through R/3's increased flexibility and options
 - Choose from a range of complementary software offered by other vendors to collaborate and interoperate within the Business Framework
- The Business Framework uses business components—configurable software application modules that collaborate via standard interfaces—to provide its agility and flexibility while maintaining application integration.
- There are four types of components: Multi-Industry Components, Industry-Specific Components, Internet Components, and Complementary Components.

To address the needs of corporations that require integrated, off-the-shelf, open system solutions that are easily and quickly adapted to new business processes, SAP has concentrated on two key areas—robust product functionality and open, integrated, flexible solutions.

- SAP software provides real-time integration of all business applications and can become fully integrated with multiple operating systems, software, and technologies.
- SAP has developed an extensive library of more than 800 predefined business processes spanning each functional software area. These processes may be selected from the SAP library and included within installed SAP applications, tailoring the application solution to the user's specific requirements.
- SAP products address the needs of global businesses. The complete suite of SAP applications is available in 14 languages, including Japanese (Kanji) and other double-byte characters. The products support multiple currencies simultaneously and automatic handling of country-specific import/export, tax, and legal requirements.

In addition, SAP is embracing the beginning of Europe's three-year program to gradually introduce a single currency throughout the European Union. The monetary union will affect virtually all corporate areas and SAP has been collaborating with other companies and associations to define the requirements of the European monetary union for enterprise business applications software. SAP's products will offer customers a smooth transition from local currencies to the new Euro.

Internet Strategy

SAP is also working to incorporate and integrate intranet and Internet technologies into business solutions for R/3 customers.

R/3 Release 3.1 is SAP's foundation for business on the Internet and will be available in the latter part of 1996. Version 3.1 extends the functionality of R/3 and makes it available over the Internet. Furthermore, it delivers a

© INPUT 1996 Reproduction prohibited.

foundation for consistent business processes that are enabled through the Internet.

- SAP's Internet solution provides enhanced business opportunities for business-to-business, consumer-to-business, and intranet applications. With 3.1, SAP will deliver more than 25 Internet components covering a range of financial accounting, supply chain management, and human resources functions.

- Examples of Internet Application Components include:

 - Consumer-to-business: Shopping Basket Based on Electronic Product Catalogs (supply chain management), Service Calls (supply chain management), Interactive Requests (financials)

 - Business-to-business: Procurement Process to Preferred Vendors (supply chain management), Special Stock Inquiries (supply chain management), Bank Data Transfer (financials), Internet KANBAN (supply chain management)

 - Intranets: Employment Opportunities (human resources), Whos Who (human resources), Ad Hoc Reports (financials), Reporting Actuals (financials)

Both internally and with its partners, the company is defining and creating a number of Internet standards-based interfaces, applications, and business processes, called BAPIs (**B**usiness **AP**plication **I**ntegration) that will extend the usefulness of R/3 in entirely new ways and to new classes of customers. BAPIs define an open business standard for direct communication between business applications from different suppliers.

In October 1996, SAP outlined its professional services strategy to expedite the creation and implementation of R/3-based Internet and intranet solutions. Services include a technology review, infrastructure planning, installation of new SAP tools, customization of Internet components, and assistance with the integration of other SAP technology.

Financials

SAP America's 1995 revenue reached an estimated $566 million, a 52% increase over 1994 revenue of $367 million. A five-year revenue summary follows:

SAP
Five-Year Revenue Summary
($ Millions, U.S.)

	Fiscal Year				
Item	1995	1994	1993	1992	1991
SAP America revenues	$566	$367	$140	$59	$50
• Percent change from previous year	52%*	157%*	137%	18%	150%
SAP AG revenues	$1,887	$1,133	$665	$532	$443

* *Currency exchange accounts for discrepancy in percent change; growth calculated in Dms.*

© INPUT 1996 Reproduction prohibited.

SAP America attributes revenue growth to:

- Its integrated, robust international product
- A flexible, scalable client/server architecture
- The strength and vision of the company

Research and development expenditures were approximately 16% of revenue in 1995, compared to 22% of revenue in 1994 and 25% of revenue in 1993.

Revenue Analysis by Product/Service

Approximately 75% of SAP America's 1995 revenue was derived from applications software product sales and 25% from consulting, training, and professional services.

- In North America, approximately 95% of total revenue was from R/3 system sales and 5% from R/2 system sales.
- A three-year summary of source of revenue by product/service for SAP America's parent company (SAP AG) follows:

SAP AG
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Software products						
- R/3 System	$1,151.4	61%	$603.8	53%	$185.3	28%
- R/2 System	189.9	10%	195.6	18%	228.7	34%
Professional services	508.4	27%	305.7	27%	251.0	38%
Other	37.0	2%	28.4	2%	--	--
Total	$1,886.7	100%	$1,133.5	100%	$665.0	100%

Interim Results

SAP America's revenue for the six months ending June 30, 1996 reached approximately $294 million.

Market Financials

Approximately 80% of SAP America's revenue is derived from the discrete and process manufacturing industries. The remaining 20% of revenue comes from utilities, universities, city government, health care, and services.

SAP America has manufacturing clients in the oil and gas, chemical, pharmaceutical, consumer packaged goods, automotive, high-tech, and electronics industries.

Geographic Markets

Approximately 86% of SAP America's 1995 revenue was derived from the U.S., 6% from Canada, 6% from Australia, and 2% from Mexico.

© INPUT 1996 Reproduction prohibited.

Employees

As of December 31, 1995, SAP America had approximately 1,400 employees, up from approximately 1,000 in December 1994.

The company currently has approximately 1,800 employees.

Key Products

Applications

SAP offers two integrated business applications software product lines—the R/2 system for mainframes and the R/3 system for open client/server environments.

- The application modules for these systems run separately and on top of the Basis System middleware, which contains the development tools for the systems and provides interface capabilities to access SAP's development environment, data dictionary, and customization and centralized tables.

- The R/3 system runs on a range of platforms, including IBM AIX and AS/400, HP-UX, Sun Solaris, Windows NT, Data General (NT), Digital UNIX, AT&T (NT), Bull BOS/x and SNI SINIX, and is compatible with various databases, including DB2400, SQLServer, ORACLE, INFORMIX, and ADABAS.

- The R/2 system runs on IBM 370/390 and compatible systems under VSE/SP, MVS, MVS/XA, MVS/ESA, CICS, and IMS/DC, and is compatible with various databases, including VSAM, DL1, ADABAS, IMS/DB, and DB2.

R/3's three-tiered client/server architecture separates the machines on a system into three function groups—database, application, and presentation.

- Databases reside on central servers or mainframe computers. Application servers hold the processing logic of the system, preparing and formatting data for individual offices or departments. Presentation servers, typically workstations or personal computers, handle all the tasks related to the presentation of data, including user interfaces to access complex applications and data.

- SAP has incorporated international standards into R/3, including ANSI-C programming language, ANSI-SQL database manipulation language, Windows 3.1 presentation manager, Macintosh, OSF Motif presentation interfaces and EDI, SNA-LU.6, CPI-C, and OSF/DCE/DME communication standards.

- As previously mentioned, SAP is embracing plans for the monetary union in Europe.

- SAP foresaw the year 2000 issue many years ago. R/3 has been year 2000-compliant from the first release and R/2 since 1991.

- SAP offers the Remote Function Call Software Developer Kit, a standard interface that enables customers, consultants, and independent software vendors to carry out individual extensions to SAP business applications that support direct communication with the function modules of R/3.

- R/3 Analyzer is a tool to help customers introduce R/3 to the enterprise. R/3 Analyzer lets users compare the standard functions offered by the R/3 system with specific business requirements.

© INPUT 1996 Reproduction prohibited.

- AcceleratedSAP is SAP's new rapid implementation process for the R/3 system. It uses a step-by-step roadmap, together with tools, templates, and questionnaires, to accelerate R/3 implementations.

In October 1994, SAP introduced a new, streamlined pricing structure for its R/3 system that includes a user-based license structure along with new alternatives for large customers purchasing the full suite of R/3 applications for enterprise-wide use.

- Under Individual Contract Pricing, customers license application functional blocks at a set price per application (ranging from $22,500 to $72,000 per major function block). This list price includes access for a set number of named users per application and companies may license access for additional named users for a fixed fee per user.

- Enterprise Value Contract Pricing is applied only to enterprise-wide licenses totaling more than $1.75 million and licenses the complete suite of R/3 business applications at a flat fee.

Applications supported by the R/3 and R/2 systems are summarized in Exhibit A on the following page and include the following:

- The SAP Accounting System offers a range of solutions for mission-critical corporate financial operations, including general ledger, accounts payable, accounts receivable, etc.

- The SAP Human Resources Management System is an integrated system that supports all planning, administration and processing responsibilities for human resource departments, including the selection and administration of applicants, management of master and time data, payroll and training and career planning.

- The SAP Materials Management and Logistics System supports an integrated supply chain for the procurement, manufacturing, sales, and distribution of goods and services.

R/3 Release 4.0, scheduled for availability in 1997, will provide enhancements for market-driven global supply chain management, new retail and public sector industry solutions, and will deliver new components of the Business Framework architecture.

- R/3 4.0 offers new functionality and Internet capabilities to improve supply chain management and time to market, and financial enhancements for corporate treasurers and controllers.

- R/3 4.0 will offer the new R/3 Retail Solution to support retailers' core business processes, such as sourcing, planning, and tracking merchandise movement along the entire value chain.

- The new Public Sector solution manages administrative and budgeting processes commonly performed by agencies and organizations in national and state governments, universities, and nonprofit organizations.

- SAP will introduce new Business Components with R/3 4.0 that encapsulate significant R/3 functionality into separate modules for improved flexibility, easier maintainability, and faster implementation. New component functionality is planned for human resources, product data management, treasury management, global ATP server, reporting server, and the Business Process Workbench.

© INPUT 1996 Reproduction prohibited.

Exhibit A
SAP Software Applications

Product/Application Area	Product/Application Area
SAP Accounting System	**SAP Materials Management and Logistics System**
Asset Management System	Materials Management System
- Fixed Asset Accounting	- Purchasing
- Investment Control	- Purchasing Information System
- Technical Asset Management	- Invoice Verification
Financial Accounting System	- Inventory Management
- General Ledger	- Warehouse Management
- Extended G/L	- EDI
- Accounts Receivable	Plant Maintenance
- Accounts Payable	- Preventative Maintenance
- Financial Controlling	- Technological Cycle
- Financial Assets Management	- Capacity Resource Planning
- Consolidation	- Work Order Cycle
- Financial Resources Management	- Order Management
Controlling (Management Accounting)	Production and Planning Control
- Cost Center Accounting	- Capacity Requirements Planning
- Activity-Based Costing	- Material Requirements Planning
- Order and Project Accounting	- Product Costing
- Product Cost Accounting	- Shop Floor Control
- Profitability Analysis	- Sales and Operations Planning
- Profit Center Accounting	- Demand Management
- Corporate Management	- Capacity Leveling
- Business Planning and Control	- Repetitive Manufacturing
SAP Human Resources Management System	- Configuration
Benefits	- Service Management
Master Data and Time Recording	- Valuation
Organization and Planning	Quality Management
Planning and Controlling	- Inspection Planning/Management
Payroll	Sales and Distribution
Personnel Administration	- Billing
Personnel Development Planning	- Shipping
Reporting, Evaluations and Statistics	- Sales Information System
Seminar Management	- Sales Order Processing
Time Management	- Sales Support
Travel Expenses	- Inventory Management
Workforce Planning	- Warehouse Management
International Gross Payroll Accounting	Project System
Information Systems	- Planning and Forecasting
EIS	
Open Information Warehouse	

© INPUT 1996 Reproduction prohibited.

Application Development Tools/Middleware/Other

SAP also offers the ABAP/4 Development Workbench (ABAP/4 DW), a client/server development tool for open, portable and highly scalable client/server applications. ABAP/4 DW is an integrated, repository-based, graphical development environment that was used to create R/3 and is available as a standalone product.

The Business Engineering Workbench is SAP's working environment for faster, easier implementation of the R/3 system. It provides a superset of working functionality, including business objects and processes for configuring the system; graphical tools for viewing, configuring, and verifying all aspects of the R/3 system; methodologies for customizing the R/3 system; and an open API that enables R/3 to be integrated easily with external systems.

Industry Centers of Expertise

SAP's Industry Centers of Expertise (ICOE) program leverages SAP's business applications and long-term partnerships with leading consulting companies in key industry areas as well as the experience of customers who are leaders in each vertical market.

Each ICOE is located in cities widely considered headquarters for the vertical industry. SAP America has introduced ICOEs for the Automotive, Financial Services, High Technology & Electronics, Oil & Gas, Utilities, Consumer Products and Retail, Health Care, and Process Industries.

- The Automotive ICOE is based in Detroit (MI).
- The Financial Services ICOE is based in Philadelphia (PA).
- The High Technology & Electronics ICOE is based in Foster City (CA).
- The Oil & Gas ICOE is based in Houston (TX) and Calgary (Canada).
- The Utilities/Telecommunications ICOE is based in Toronto (Canada).
- The Consumer Products and Retail ICOE is based in Chicago (IL).
- The Health Care ICOE is based in Boston (MA).
- The Process Industries ICOE is based in New Jersey.

Various consulting firms participate in the ICOEs, including Andersen Consulting, Coopers & Lybrand, ICS Deloitte, IBM Consulting, Ernst & Young, CAP GEMINI, KPMG Peat Marwick, Digital, and Price Waterhouse.

Key Services

SAP America's Professional Services Organization has been expanded, refocused, and realigned to address the needs of SAP customers to implement R/3 rapidly.

- The unit works with and promotes its partners as key implementers in both national and global markets.
- The Professional Services Organization also provides application consulting to customers and, in special cases, exclusively provides project management and consulting resources to complete accelerated implementation projects.

To enable accelerated R/3 implementations, the Professional Services Organization has five specialized consulting groups to provide the most targeted expertise for different

© INPUT 1996 Reproduction prohibited.

customer and market requirements, including the following:

- The Emerging Technology group assists customers with the design and implementation of electronic commerce needs including the Internet, workflow, and application link enabling (ALE).
- The Basis Technology group extends basic installation tuning and ABAP/4 support to include increased technical planning and performance management consulting.
- The Platinum Consulting group conducts nationwide project reviews and specialty consulting, troubleshooting, and guidance on integration and cross-application issues.
- Field Consulting provides increased presence and greater involvement for local customers' projects.
- The Global Support group works with Global Logo Partners to provide guidance to CIOs and business executives by offering high-level project management on large enterprise-wide rollouts of R/3.

By realigning according to market size, SAP Professional Services provides customized assistance according to customers' needs and resources.

- Global Accounts—R/3 implementations in these large multinational firms continue to be led most frequently by SAP Global Logo Partners. SAP now offers the services of dedicated Global Support Manager (GSM) for the deployment strategy, shared best practices and lessons learning, and coordination of resources from both SAP and partners worldwide.
- National Accounts—For companies with revenues between $200 million and $2.5 billion, SAP will focus on supporting accelerated R/3 implementations independently or in cooperation with smaller national partners and logo partners.
- Small Enterprises—For small enterprises, SAP has made R/3 easier to evaluate, purchase, implement, and use, allowing these companies to take full and cost-effective advantage of R/3. The new Certified Business Solutions program includes the unveiling of SAP's first North American indirect channel—these resellers are certified business solutions providers, offering customers one-stop shopping that includes new service and support structures. In addition, this program introduces a market-focused implementation methodology and several new tools for software configuration, system administration, and data conversion.

SAP system consultants assist in all areas of support, including presales assistance, technical and applications consulting, software upgrade installation, and education and training.

SAP software customers receive software maintenance free of charge for six months from the date of software delivery. After the first six months, maintenance services are available annually for 15% of the annual license fee.

Product release, product availability, and functionality information is provided via InfoLine, a Lotus Notes-based service.

SAP's Early Watch is a service that provides R/3 customers with on-line proactive system diagnosis, supporting customers from

© INPUT 1996 Reproduction prohibited.

installation through full system implementation and production. Early Watch monitors and analyzes system performance to catch problems before they become critical.

SAP has redesigned its training curriculum and developed a new Project Team Training concept for R/3 Release 3.0.

- Three levels of training are included:
 - Introductory courses provide an overview of the features and functions of the R/3 system, the services and support available to customers, the implementation framework, and SAP-specific terminology.
 - Core business-process courses give participants the skill they need to apply R/3 to their own company's business processes. Courses include Customer Order Management, Procurement, Human Resources Management, Manufacturing Planning, Manufacturing Execution, Financial Management Accounting, and Reporting.
 - Advanced courses help project team members acquire specific expertise to support unique requirements. More than 100 advanced courses are offered.
- Project Team Training courses are available in SAP regional training centers in the metropolitan areas of Atlanta, Boston, Chicago, Philadelphia, San Francisco, Calgary, and Toronto. Training will soon be available at client sites.

SAP's Service 2000 program features:

- Growing service support centers
- Regular worldwide satisfaction surveys
- Customer satisfaction-based incentive plans
- On-line support services
- Company-wide optimization of business processes within SAP
- Early Watch/system monitoring tools
- Partner academy/certification programs
- Customer focus groups
- Hotline
- SAP access via Lotus Notes
- Customer advisory board

In addition to its own services, SAP America partners also provide a range of consulting, installation, and training services.

Clients

SAP America currently has more than 670 customers throughout North America, up from approximately 300 a year ago.

Approximately 95% of these are R/3 System customers. A number of R/2 customers also have R/3 installations.

A sampling of R/3 clients is shown in Exhibit B on the following page.

Marketing and Sales

SAP America markets its products and services through a direct sales force.

© INPUT 1996 Reproduction prohibited.

Exhibit B
SAP America R/3 Clients

Industry/Client	Industry/Client
Automotive	**Oil & Gas**
BMW North America	Chevron
Volkswagen Mexico	Crown Central Petroleum
Allied Automotive	Elf Lubricants
ACME Steel	Lyondell Petrochemical
Delphi Automotive Europe	Imperial Oil
Consumer Products and Retail	**Process Industries**
Boston Beer Company	Cataphote
Colgate-Palmolive	Merck
Cultor Foods	Ciba-Geigy
Revlon	Hoechst Celanese
Chesebrough Ponds	Hercules
Eastman Kodak	Lakes Chemical Corp.
Procter & Gamble	Union Carbide
Reebok	Cerdec
Borden	
	Utilities/Telecommunications
High-Tech/Electronics	Lucent Technologies
Accugraph	Ontario Hydro
Apple Computers	PG&E
Banyan Systems	Westcoast Energy
Bay Networks	Trans Canada Pipeline
CalComp	Manitoba Hydro
Digital Equipment	
Fujitsu Microelectronics	**Other**
Hewlett-Packard	The City of Phoenix
IBM	Methodist Health Systems
Informix	Mercedes-Benz Lease Finanz
Intel	Molex
Intergraph	*The Seattle Times*
Intersolv	
Micrografx	
Microsoft	
Synopsys	
UB Networks	
Wang	

© INPUT 1996 Reproduction prohibited.

Alliances

SAP America works closely with its various partners to provide support to its software clients.

SAP America's various partners are summarized in Exhibit C on the following page.

At present, SAP actively works with six types of partner firms:

- Hardware Partners are leading vendors who provide the computing hardware necessary to meet a customer's system requirements. These partners have developed dedicated organizations to provide strong SAP support, from product selection to system set-up, installation, and ongoing performance tuning.

- Consulting Partners are business and technology consulting firms that provide assistance in all phases of an R/3 implementation product, including going live, training, and education. Many partners maintain SAP solution centers devoted to specific industries and business needs. SAP groups its consulting partners into three categories, based on business scope:

 - Global Logo Partners are the largest and most experienced consulting partner firms, with multinational and multi-industry SAP support capabilities.

 - National Logo Partners are large firms with the resources and capabilities to provide SAP support services throughout one particular country.

 - Implementation Partners are firms providing more localized or specialized SAP support, such as in one region of a country or in a specific industry.

- Certified Business Solution Providers are vendors who provide complete support for SAP's R/3 product to small and midsized companies. These vendors are authorized to sell SAP's products and provide all services required to implement and use SAP's business solutions.

- Technology Partners include vendors of database, operating systems, networking, and other information technology products. SAP collaborates closely with these partners to ensure the seamless integration of their products with SAP's software solutions.

- SAP's Complementary Software Program enables independent software vendors to interface their products with SAP's product line. SAP differentiates between three opportunities to partner with SAP as a software vendor:

 - Software vendors who have created a product with an external interface to R/3 connecting with a standard Business API (application API) of the R/3 system have the opportunity to become complementary software vendors with a certified interface.

 - Development partners are vendors who have SAP executive management support to develop required integration to R/3 and a contractual relationship with SAP.

 - Independent software vendors are those vendors who desire to build an interface to R/3 in an area where SAP does not presently plan to offer a standard Business API and is not choosing to pursue direct relationships actively.

© INPUT 1996 Reproduction prohibited.

Exhibit C
SAP America Partners

Technology Partners	Hardware/Platform Partners	Implementation Partners	Certified Business Solution Providers	Global Logo Partners
Apple	Bull	Applied Integration Services	Australian Solutions and People Pty. Ltd.	Andersen Consulting
Hewlett-Packard	Compaq	CCAI	CAI-Advanced Solutions	CAP GEMINI
IBM	Data General	CIScorp	Enterprise Solutions Partner Pty. Ltd.	Coopers & Lybrand
IDS Prof. Scheer	Digital	Clarkston Potomac Group	Global Core Strategies	CSC
Informix	Fujitsu	Computer Aid	Missana & Associates Inc.	Digital (SAP InfoCenter)
Intel	Hewlett-Packard	Computerpeople	Optimum Software Solutions Inc.	Deloitte & Touche Consulting/ICS
iXOS Software GmbH	Hitachi	Deno Morris Group	SAPient Software Inc.	EDS
Microsoft	IBM	Documentation Associates	MRK Technologies, Ltd.	Ernst & Young
Oracle	Intergraph	Dynamic Data Solutions	Sigma	Hewlett-Packard
Software AG	NCR	ENERTECH	FINTECH Services Ltd.	IBM
Sun Microsystems	NEC	Grom Associates		KPMG Peat Marwick
	Sequent	HJM Consulting		ORIGIN
	Siemens Nixdorf	Intelligroup		Price Waterhouse
	Sun Microsystems	ISSC		SNI (R/3 Live)
		SETAC		
		SPO		
		Plaut		
		TSC		

- The Complementary Software Partner program currently has more than 200 partners.

- Development Partners are firms that work with SAP in the development of future releases of SAP software. These firms provide specific business, technical, or industry expertise that complements and extends the international capabilities of SAP's development centers in Walldorf (Germany), Foster City (CA), and Tokyo (Japan).

SAP's Alliance Training Program supports the hardware vendors and consulting firms with which SAP has alliances and ensures a consistent level of training. Partner Training Academies in Dallas (TX) and Boston (MA) offer a range of courses related to SAP's software products.

Recently announced alliances include the following:

- In March 1996, SAP announced it will work with Microsoft and standards organizations to develop common interfaces for conducting business transactions over the Internet. SAP will build on Microsoft's implementation of open Internet industry standards,

© INPUT 1996 Reproduction prohibited.

including Microsoft Internet Information Server, merchant server, Microsoft Internet Explorer, and ActiveX Technologies.

Competitors

In the high-technology/electronics segment, SAP America's primary competitor is Oracle.

In the process manufacturing market, current competitors include Datalogix, Marcam, qad, and System Software Associates.

Other competitors in the applications market include PeopleSoft (human resources), Oracle, D&B Software (financials), and Avalon and BAAN (manufacturing).

Assessment

SAP America's strengths include its fully integrated supply chain product set; support from a strong and large multinational parent company; a strong base of hardware, software and implementation partners; years of strong customer relationships that help focus and drive the company direction; and a continued commitment to research and development.

Challenges over the coming year include managing the company's rapid growth and satisfying the demand for personnel with SAP knowledge and experience.

Parent Company

SAP AG
P.O. Box 1461
Neurottstrasse 16
D-69190 Walldorf, Germany
Phone: 49 6227 34-0

© INPUT 1996 Reproduction prohibited.

IT2000

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

February 1995

SAP America, Inc.

President & CEO: **Klaus P. Besier**
International Court Three
300 Stevens Drive
Philadelphia, PA 19113
Phone: **(610) 521-4500**
Fax: **(610) 595-4910**

Status:	Subsidiary
Parent	SAP AG
Employees:	1,000 (12/94)
Revenue:	$ 367,000,000
Fiscal Year End:	12/31/94

Key Points

- SAP America is the largest of SAP AG's 28 international subsidiaries. SAP AG, a global leader in flexible, integrated business applications software, offers two product lines—the client/server-based R/3 system and the mainframe-based R/2 system.
- In late 1994, SAP announced a new initiative—Industry Centers of Expertise (ICOEs)—which combines targeted software solutions and industry-specific consulting services to enable SAP customers to tackle information management challenges that are unique to their lines of business. Six ICOEs have been introduced—High Technology & Electronics, Oil & Gas, Utilities, Healthcare, Consumer Packaged Goods and Chemical/Pharmaceutical.
- SAP America's revenue has grown at an average annual growth rate of 130% over the past five years, with 1994 revenues reaching $367 million and the number of North American product installations rising to 300.
- In October 1994, SAP announced a streamlined user-based pricing structure for its R/3 client/server business applications to simplify the license process and ease contract administration over time.
- In August 1994, R/3 became available for the Microsoft Windows NT platform. In September 1994, R/3 was made available for the newest version of Windows NT, version 3.5.

© INPUT 1995. Reproduction prohibited.

Company Description

SAP America, Inc. markets and supports the mainframe-based R/2 system and the client/server-based R/3 system—fully integrated enterprise-wide applications software systems designed to integrate the information needs of Fortune 2000 companies.

- SAP America operates as a wholly owned subsidiary of SAP AG.
- SAP America was originally established in January 1988 to market the R/2 system in the U.S.

SAP AG was founded in 1972 in Walldorf (Germany) by four former IBM engineers to develop standard applications software.

- SAP AG's mainframe-based R/2 system was released in 1979.
- In 1992, SAP AG delivered its client/server-based R/3 system three months ahead of schedule—effectively beating key competitors to market in the client/server computing environment.
- SAP AG's 1994 revenues reached over $1.13 billion a 66% increase over 1993 revenue of $665 million.
- SAP AG currently has more than 5,000 employees, 28 international subsidiaries and more than 4,300 customers worldwide.

Organization and Structure

Klaus Besier, CEO and president of SAP America, has responsibility for SAP AG's operation in the U.S., Canada, Mexico and Australia.

The Professional Services unit, headed by vice president Paul Grillo, oversees training, education, corporate consulting, development, technology, translation, internal systems and the technical support hotline.

Headquartered in Philadelphia (PA), SAP America has four U.S. regional offices in Atlanta (GA), Chicago (IL), Philadelphia (PA) and Foster City (CA), with numerous district offices and training centers throughout the U.S.

- U.S. district offices are in Boston (MA), Denver (CO), Dallas and Houston (TX), Seattle (WA) and Newport Beach (CA). Additional district offices are planned for Minneapolis (MN) and Tampa (FL).
- SAP America also has a Development Center in Foster City (CA).

The following wholly owned subsidiaries report to SAP America:

- SAP Canada is headquartered in Toronto (Ontario). District offices are in Vancouver, Calgary and Montreal.
- SAP Mexico is headquartered in Mexico City.
- SAP Australia has regional /district offices in Sidney and Melbourne.

Company Strategy

The company's corporate mission is to "provide high-quality software technology and support services that allow organizations to quickly, easily and cost-effectively support their existing and emerging business needs."

SAP America is committed to the business applications arena and to understanding the challenges facing businesses in implementing enterprise technology solutions. Elements of SAP America's strategy include:

- Continuing to promote and enhance R/3 client/server offerings, including significant investments in research and development
- Targeting and expanding within specific vertical markets through its Industry Centers of Expertise program to speed implementations and provide specific solutions for target industries

© INPUT 1995. Reproduction prohibited.

- Extending market coverage to small and medium-sized organizations
- Working closely with partners to help implement and support its products
- Expanding geographically to support customers on a local basis

To address the needs of corporations that require integrated, off the shelf, open system solutions that are easily and quickly adapted to new business processes, SAP has concentrated on two key areas—robust product functionality and open, integrated, flexible solutions.

- SAP software provides real-time integration of all business applications and can become fully integrated with multiple operating systems, software and technologies.
- SAP has developed an extensive library of more than 800 predefined business processes spanning each functional software area. These processes may be selected from the SAP library and included within installed SAP applications, tailoring the application solution to suit the user's specific requirements.
- SAP products address the needs of global businesses. The complete suite of SAP applications is available in 12 languages, including Japanese (Kanji) double-byte characters. The products support multiple currencies simultaneously and automatic handling of country-specific import/export, tax and legal requirements.

Financials

SAP America's 1994 revenue reached an estimated $367 million, a 157% increase over 1993 revenue of $140 million. A five-year revenue summary follows:

SAP
Five-Year Revenue Summary
($ Millions)

	Fiscal Year				
Item	1994	1993	1992	1991	1990
SAP America revenues	$367	$140	$59	$50	$20
• Percent change from previous year	157%*	137%	18%	150%	186%
SAP AG revenues	$1,130	$665	$532	$442	$313

* *Currency exchange accounts for discrepancy in percent change; growth calculated in Dms.*

SAP America attributes revenue growth to:

- Integrated, robust international product
- Flexible, scalable client/server architecture
- Strength, vision of company

Research and development expenditures were approximately 22% of revenue in 1994, 25% of revenue in 1993 and 29% of revenue in 1992.

Revenue Analysis by Product/Service:

Approximately 75% of SAP America's 1994 revenue was derived from applications software product sales and 25% from consulting, training and professional services.

- In North America, approximately 75% of total revenue was from R/3 system sales and 25% from R/2 system sales.
- A three-year summary of source of revenue by product/service for SAP America's parent company (SAP AG) follows:

© INPUT 1995. Reproduction prohibited.

SAP AG
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1994		1993		1992	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Software products						
- R/3 System	$604	53%	$185	28%	$51	10%
- R/2 System	201	18%	229	34%	250	47%
Professional services	325	29%	251	38%	231	43%
Total	$1,130	100%	$665	100%	$532	100%

Market Financials

Approximately 80% of SAP America's revenue is derived from the discrete and process manufacturing industries. The remaining 20% of revenue comes from utilities, universities, city government, health care and services.

SAP America has manufacturing clients in the oil and gas, chemical, pharmaceutical, consumer packaged goods, automotive, high-tech and electronics industries.

Geographic Markets

Approximately 86% of SAP America's 1994 revenue was derived from the U.S., 6% from Canada, 6% from Australia and 2% from Mexico.

Employees

As of December 31, 1994, SAP America had approximately 1,000 employees, up from approximately 464 employees a year ago.

Key Products

Applications

SAP offers two integrated business applications software product lines—the R/2 system for mainframes and the R/3 system for client/server environments.

- The systems have similar functionality. The application modules for these systems run separately and on top of the Basis System middleware, which contains the development tools for the systems and provides interface capabilities to access SAP's development environment, data dictionary and customization and centralized tables.

- The R/3 system runs on a range of platforms, including IBM AIX, HP-UX, Sun Solaris, Windows NT, Data General (NT), DEC OSF/1, AT&T (NT), Bull BOS/x and SNI SINIX and is compatible with various databases, including ORACLE, INFORMIX and ADABAS.

- The R/2 system runs on IBM 370/390 and compatible systems under VSE/SP, MVS, MVS/XA, MVS/ESA, CICS and IMS/DC and is compatible with various databases, including VSAM, DL1, ADABAS, IMS/DB and DB2.

R/3's three-tiered client/server architecture separates the machines on a system into three function groups—database, application and presentation.

- Databases reside on central servers or mainframe computers. Application servers hold the processing logic of the system, preparing and

© INPUT 1995. Reproduction prohibited.

formatting data for individual offices or departments. Presentation servers, typically workstations or personal computers, handle all the tasks related to the presentation of data, including user interfaces to access complex applications and data.

- SAP has incorporated international standards into R/3, including ANSI-C programming language, ANSI-SQL database manipulation language, Windows 3.1 presentation manager, Macintosh, OSF Motif presentation interfaces and EDI, SNA-LU.6, CPI-C and OSF/DCE/DME communication standards.

- SAP offers the Remote Function Call Software Developer Kit, a standard interface that enables customers, consultants and independent software vendors to carry out individual extensions to SAP business applications that support the direct communication with the function modules of R/3.

- R/3 Analyzer is a tool to help customers introduce R/3 to the enterprise. R/3 Analyzer lets users compare the standard functions offered by the R/3 system with specific business requirements.

In October 1994, SAP introduced a new, streamlined pricing structure for its R/3 system that includes a user-based license structure along with new alternatives for large customers purchasing the full suite of R/3 applications for enterprise-wide use.

- Under Individual Contract Pricing, customers license application functional blocks at a set price per application (ranging from $22,500 to $72,000 per major function block). This list price includes access for a set number of named users per application and companies may license access for additional named users for a fixed fee per user.

- Enterprise Value Contract Pricing is applied only to enterprise-wide licenses totaling more than $2.25 million and licenses the complete suite of R/3 business applications at a flat fee.

Applications supported by the R/3 and R/2 systems are summarized in Exhibit A and include the following:

- The SAP Accounting System offers a range of solutions for mission critical corporate financial operations, including general ledger, accounts payable, accounts receivable, etc.

- The SAP Human Resources Management System is an integrated system that supports all planning, administration and processing responsibilities for human resource departments, including the selection and administration of applicants, management of master and time data, payroll and training and career planning.

- The SAP Manufacturing and Logistics System support an integrated supply chain for the procurement, manufacturing, sales and distribution of goods and services.

Application Development Tools and Middleware

SAP also offers the ABAP/4 Development Workbench (ABAP/4 DW), a client/server development tool for open, portable and highly scaleable client/server applications. ABAP/4 DW is an integrated, repository-based, graphical development environment that was used to create R/3 and is available as a standalone product.

© INPUT 1995 Reproduction prohibited.

Exhibit A
SAP Software Applications

Product/Application Area	Product/Application Area
SAP Accounting System Asset Management System - Fixed Asset Accounting - Investment Control - Technical Asset Management Financial Accounting System - General Ledger - Extended G/L - Accounts Receivable - Accounts Payable - Financial Controlling - Financial Assets Management - Consolidation - Financial Resources Management Controlling (Management Accounting) - Cost Center Accounting - Activity Based Costing - Order and Project Accounting - Product Cost Accounting - Profitability Analysis - Profit Center Accounting - Corporate Management - Business Planning and Control **SAP Human Resources Management System** Organization and Planning Planning and Controlling Payroll Personnel Administration Personnel Development Planning Reporting, Evaluations and Statistics Time Management Travel Expenses International Gross Payroll Accounting	**SAP Materials Management and Logistics System** Materials Management System - Purchasing - Purchasing Information System - Invoice Verification - Inventory Management - Warehouse Management - EDI Plant Maintenance - Preventative Maintenance - Technological Cycle - Capacity Resource Planning - Work Order Cycle - Order Management Production and Planning Control - Capacity Requirements Planning - Material Requirements Planning - Product Costing - Shop Floor Control - Sales and Operations Planning - Demand Management - Capacity Leveling Quality Management - Inspection Planning/Management Sales and Distribution - Billing - Shipping - Sales Information System - Sales Order Processing - Sales Support - Inventory Management - Warehouse Management Project System - Planning and Forecasting

© INPUT 1995 Reproduction prohibited.

Industry Centers of Expertise

SAP's Industry Centers of Expertise (ICOE) program leverages SAP's business applications and long-term partnerships with leading consulting companies in key industry areas as well as the experience of customers who are leaders in each vertical market.

Each ICOE is located in cities widely considered headquarters for the vertical industry. SAP America has introduced ICOEs for High Technology & Electronics, Oil & Gas, Utilities, Consumer Packaged Goods, Healthcare and Chemical/Pharmaceuticals.

- The High Technology & Electronics ICOE is based in Foster City (CA).
- The Oil & Gas ICOE is based in Houston (TX) and Calgary (Canada).
- The Utilities ICOE is based in Toronto (Canada).
- The Consumer Packaged Goods ICOE is based in Chicago (IL).
- The Healthcare ICOE is based in Boston (MA).
- The Chemical/Pharmaceuticals ICOE is based out of New Jersey.

Various consulting firms participate in the ICOEs, including Andersen Consulting, Coopers & Lybrand, ICS Deloitte, IBM Consulting, Ernst & Young, CAP Gemini, KPMG Peat Marwick, Digital Consulting and Price Waterhouse.

Key Services

SAP America's Professional Services unit, greatly expanded in 1994, is responsible for training, education, corporate consulting, development, technology, internal systems and the technical support hotline.

SAP system consultants assist in all areas of support, including presales assistance, technical and applications consulting, software upgrade installation, education and training.

SAP software customers receive software maintenance free of charge for six months from the date of software delivery. After the first six months, maintenance services are available annually for 15% of the annual license fee.

Product release, product availability and functionality information is provided via InfoLine, a Lotus Notes-based service.

SAP's Early Watch is a service that provides R/3 customers with on-line proactive system diagnosis, supporting customers from installation through full system implementation and production. Early Watch monitors and analyzes system performance to catch problems before they become critical.

SAP America offers more than 160 educational courses at training centers in the metropolitan areas of Atlanta, Boston, Chicago, Philadelphia, San Francisco, Calgary and Toronto and at client sites.

- Courses are available in the areas of asset management, controlling, financial accounting, human resources, materials management, plant management, production planning, project system, sales and distribution and quality management.
- SAP also offers a Jump Start training program for customers beginning SAP implementation or for individuals joining an existing project team. The program offers blocks of related courses.

SAP's Service 2000 program features:

- Growing service support centers
- Regular worldwide satisfaction surveys
- Customer satisfaction-based incentive plans
- On-line support services

© INPUT 1995. Reproduction prohibited.

- Company-wide optimization of business processes within SAP
- Early Watch/system monitoring tools
- Partner academy/certification programs
- Customer focus groups
- Hotline
- SAP access via Lotus Notes
- Customer advisory board

In addition to its own services, SAP America partners also provide a range of consulting, installation and training services.

Clients

SAP America currently has an estimated 300 customers throughout North America, up from approximately 200 a year ago. Approximately 95% of these are R/3 System customers. A number of R/2 customers also have R/3 installations. A sampling of R/3 clients is shown in Exhibit B.

Exhibit B
SAP America R/3 Clients

Industry/Client	Industry/Client
Oil & Gas	**Chemical/Pharmaceutical**
Chevron	Merck
Crown Central Petroleum	Ciba-Geigy
Elf Lubricants	Hoechst Celanese
Lyondell Petrochemical	Hercules
Imperial Oil	Cerdec
Consumer Packaged Goods	**Utilities**
Colgate-Palmolive	Ontario Hydro
Revlon	PG&E
Chesebrough Ponds	Westcoast Energy
Procter & Gamble	Trans Canada Pipeline
Borden	Manitoba Hydro
High-Tech	
Apple Computers	
Intergraph	
Intel	
Informix	
Digital Equipment	

Marketing and Sales

SAP America markets its products and services through a direct sales force.

Alliances

SAP America works closely with its various partners to provide support to its software clients. SAP America's various partners are summarized in Exhibit C.

© INPUT 1995 Reproduction prohibited.

Exhibit C
SAP America Partners

Technology Partners	Platform Partners	Implementation Partners	R/3 Logo Partners
Informix	AT&T	Applied Integration Services	Andersen Consulting
Intel	Bull	CCAI	Cap Gemini America
iXOS Software GmbH	Compaq	CIScorp	Coopers & Lybrand
Microsoft	Data General	Clarkston Potomac Group	CSC Consulting
Oracle	DEC	Computer Aid	Deloitte & Touche
Software AG	Hewlett Packard	Computerpeople	Ernst & Young
Sterling Software	IBM	Deno Morris Group	IBM Consulting
St. Paul Software	Sequent	Documentation Associates	ICS
Texas Instruments	Siemens Nixdorf	Dynamic Data Solutions	KPMG Peat Marwick
	Sun Microsystems	ENERTECH	Origin
		Grom Associates	Price Waterhouse
		HJM Consulting	
		Intelligroup	
		SETAC	
		SPO	
		TSC	

SAP America's Logo Partners program offers management and technical consulting to SAP North American clients, enhancing SAP America's internal training and support.

Logo Partners have resources trained in SAP product installation and support dedicated to SAP products, supplementing SAP America's expertise in vertical markets and offering various professional services, including business process re-engineering, implementation, systems integration, project management and user training.

Implementation Partners are firms with 20 or more SAP-trained people that do implementations. Technology Partners and Platform Partners include a number of world-class hardware and software providers and database vendors who work with SAP to develop, benchmark and support various operating systems, databases and machine configurations.

SAP's Alliance Training Program supports the hardware vendors and consulting firms with which SAP has alliances and ensures a consistent level of training. Partner Training Academies in Dallas (TX) and Boston (MA) offer a range of courses related to SAP's software products.

Recently announced alliances include the following:

- In December 1994, SAP America and IRI Logistics (a division of Information Resources)

© INPUT 1995. Reproduction prohibited.

announced a cooperative agreement to integrate consumer goods point-of-sale-based demand planning solutions from IRI Logisitics with SAP's R/3 business applications.

- In February 1995, SAP announced a strategic partnership with DEC to dedicate combined resources to the process industry.

- In February 1995, SAP and Andersen Consulting announced they are partnering with several oil companies for the redevelopment of their R/2 (mainframe) downstream IS-Oil product onto an R/3 (client/server) platform.

Competitors

In the high technology/electronics segment, SAP America's primary competitor is Oracle.

In the process manufacturing market, current competitors include Datalogix, Marcam, qad and System Software Associates.

Other competitors in the applications market include PeopleSoft (human resources), Oracle and D&B Software (financials) and Avalon and BAAN (manufacturing).

Assessment

SAP America's strengths include its fully integrated supply chain product set, support from a strong and large multinational parent company and strong base of hardware, software and implementation partners.

Challenges over the coming year include managing the company's rapid growth and satisfying the demand for personnel with SAP knowledge and experience.

Parent Company

SAP AG
P.O. Box 1461
Neurottstrasse 16
D-69190 Walldorf
Germany
Phone: 49 6227 34-0

© INPUT 1995 Reproduction prohibited.

SAP AMERICA, INC.

International Court One
100 Stevens Drive
Philadelphia, PA 19113
Phone: (215) 521-4500
Fax: (215) 521-6290

President:	Klaus P. Besier
Status:	Subsidiary
Parent:	SAP AG
Total Employees:	350
Total Revenue:	$54 million
Fiscal Year End:	12/31/92

Key Points

- SAP America (SAP) delivered its client/server-based application to market three months ahead of schedule. SAP effectively beat a key competitor to market, offering their client/server application software, R/3.
- The R/3 product positions SAP America to compete in the burgeoning market of client/server software running on midrange relational technology supporting databases.
- SAP America is positioned in the client/server-based financial applications, materials management, sales and distribution, and human resource applications markets.
- SAP America's R/3 was chosen in an informal poll of Information Week readers as one of the best products of 1992.

Copyright 1993 by INPUT. Reproduction Prohibited.

Company Description

SAP America, Inc. markets and supports the mainframe-based R/2 system and the client/server-based R/3 system, fully integrated enterprise-wide applications software systems designed to integrate the information needs of Fortune 500 companies.

Operations/ Structure

SAP America operates as a wholly owned subsidiary of SAP AG, developer of the R/2 and R/3 Systems. SAP America was established in January 1988 to market the R/2 System in the U.S.

- SAP AG was founded in 1972 in Walldorf (Germany) by four former IBM engineers.
- SAP AG reported 1992 sales of $532 million (U.S.), an increase of 18% over 1991 sales of $441 million. SAP AG currently has over 3,300 employees, 28 international subsidiaries, and more than 2,600 customers worldwide.

Strategy

SAP's challenges are to:

- Expand its international coverage and customer base
- Exploit opportunities in the United States and Eastern Europe
- Introduce new product ranges offering greater portability and distributed computing
- Extend market coverage to small and medium-sized organizations

To address the needs of large and midsized corporations that require integrated applications systems using an open systems, client/server strategy, SAP announced the R/3 System in 1992. Moreover, R/2 and R/3 can run concurrently and can be integrated to optimize both environments.

- Like the R/2 System, the R/3 System provides a range of on-line, real-time, integrated business applications. Also like R/2, R/3 customers can address specific applications needs while laying the foundation for a single, enterprise-wide strategy.
- The product is available in Europe and in North America. R/3 supports UNIX environments on IBM, Hewlett-Packard, DEC, Siemens-Nixdorf, and Bull platforms. R/3 will support Windows NT in 1994.

Copyright 1993 by INPUT. Reproduction Prohibited.

Financials

SAP America recorded 1992 revenue of about $54 million, an 18% increase over 1991 revenue of $44.0 million.

Competitors

SAP America competitors include American Software, Computer Associates, D&B Software, Oracle, and Walker Interactive.

Key Products and Services

One hundred percent of SAP America's 1992 revenue was derived from applications software products and associated support services.

R/2 System

The R/2 System is an integrated set of ten business applications modules that manage a range of strategic business applications for data-intensive corporations with numerous locations and operations.

- The R/2 System runs on IBM 370 and compatible mainframes.
- The core of the R/2 System is the Basis System, which contains development tools for the system and provides interface capabilities that allow users to access data base information in any module from anywhere in the company.
- R/2 System modules include:
 - RF: Financial Accounting
 - FA: Fixed Assets
 - RK: Cost Accounting
 - RK-P: Project Planning and Control
 - RV: Sales
 - RM-PPS: Production Planning and Control
 - RM-MAT: Material Management
 - RM-QSS: Quality Assurance
 - RM-INST: Plant Maintenance
 - RP: Personnel Management
- Modules are available and priced separately. Pricing on the Basis System starts at $100,000, depending on the configuration.

R/3 System

The R/3 System is an integrated set of business applications modules that work with client/server architecture to provide links between finance, manufacturing, sales and distribution, and human resource applications. R/3 is based on SAP's earlier R/2 package and utilizes that product's functionality, interoperability, and portability.

Copyright 1993 by INPUT. Reproduction Prohibited.

- The core of the R/3 System is the Basis System, which accesses SAP's development environment, data dictionary, and customization and centralization tables.

- Version 1.1 of R/3 includes the following modules:

 - RF: Financial Accounting
 - FA: Fixed Assets
 - RK: Cost Accounting
 - RK-P: Project Planning and Control
 - RV: Sales
 - RM-MAT: Material Management

- Modules are available and priced separately. Pricing on the R/3 1.1 integrated software package starts at $50,000, depending on the configuration.

- Release 2.0 of R/3 will be available by the third quarter of 1993.

Alliances

SAP America has various strategic alliances/relationships with companies that augment its sales and support efforts in the U.S. SAP Alliance partners include Andersen Consulting, CAP Gemini America, Coopers & Lybrand, Computer Task Group, Deloitte & Touche, Electronic Data Systems, Ernst & Young, KMPG Peat Marwick, and Price Waterhouse.

- SAP has established two separate Centers of Expertise (COE), one with Price Waterhouse and one with Deloitte & Touche. The Centers of Expertise are joint service organizations with dedicated staff from both SAP and its joint venture partners. Both COEs support software implementations and provide a range of functional, technical, and project management services.

Industry Markets

SAP America's revenue is derived from approximately 75 clients in various industries, including oil and gas, chemical, pharmaceutical, packaged goods, process manufacturing, discrete manufacturing, electronics, utilities, and food industries.

Clients

Customers typically are large companies requiring a company-wide business strategy rather than a disjointed collection of software applications from different vendors.

A cross-section of U.S. clients include Amoco Corporation, Applied Automation, BMW North America, Chevron Corporation, Cincinnati

Copyright 1993 by INPUT. Reproduction Prohibited.

Gas & Electric, Convex Computer Corporation, Dow Chemical, E.I. Du Pont de Nemours, General Mills, Hitachi Data Systems, ICI Americas, Mannesmann Pipe & Steel, Millar, and Mobil.

Geographic Markets

One hundred percent of SAP America's revenue is derived from the U.S.

In addition to its headquarters and Northeast Regional office in Philadelphia (PA), SAP America has regional offices in Foster City (CA), Chicago (IL), and Atlanta (GA).

SAP has also established a Development Center in Foster City, CA.

SAP America's parent, SAP AG, is a worldwide company with over 2600 customers in 35 different countries. SAP AG has more than 3,300 employees in 28 subsidiaries worldwide.

Copyright 1993 by INPUT. Reproduction Prohibited.

SAP AMERICA, INC.
International Court One
100 Stevens Drive
Suite 350
Lester, PA 19113
(215) 521-4500

Klaus Besier, Executive Vice President
Wholly Owned Subsidiary of SAP AG
Total Employees: 200
Total Revenue, Fiscal Year End
12/31/91: $44,000,000

The Company

SAP America, Inc. markets and supports the R/2 System, a fully-integrated mainframe applications software system designed to integrate the information needs of Fortune 500 companies.

SAP America operates as a wholly owned subsidiary of SAP AG, developer of the R/2 System. SAP America was established in January 1988 to market the R/2 System in the U.S.

- SAP AG was founded in 1972 in Walldorf (Germany) by four former IBM engineers.
- In 1985 SAP International was formed in Biel (Switzerland) to support the marketing and sales activities of SAP AG's international subsidiaries. SAP International's operations were consolidated into SAP AG's headquarters in Walldorf in April 1992.
- SAP AG reported sales of $441 million (U.S.) for 1991, an increase of 41% over 1990 sales of $332.7 million. SAP AG currently has 2,500 employees, 14 international subsidiaries, and more than 1,600 customers worldwide.

SAP AG's challenges are to:

- Expand its international coverage and customer base
- Exploit opportunities in Eastern Europe
- Introduce new product ranges offering greater portability and distributed computing
- Extend market coverage to small and medium-sized organizations

To address the needs of large and midsized corporations that require integrated applications systems using an open systems, client/server strategy, SAP has announced the R/3 System.

Copyright 1992 by INPUT. Reproduction Prohibited.

Moreover, R/2 and R/3 can run concurrently and can be integrated to optimize both environments.

- Like the R/2 System, the R/3 System will provide a range of on-line, real-time, integrated business applications. Also like R/2, R/3 customers can address specific applications needs while laying the foundation for a single, enterprise-wide strategy.

- The product is currently available in Europe and will be available in North America in January 1993. R/3 supports UNIX environments on IBM, Hewlett-Packard, DEC, Siemens-Nixdorf, and Bull platforms.

SAP America recorded 1991 revenue of about $44.0 million, a 265% increase over 1990 revenue of $16.7 million. SAP AG experienced a 244% revenue growth in North America during 1991.

SAP America competitors include D&B Software, Computer Associates, Walker Interactive, and American Software.

Key Products and Services

One hundred percent of SAP America's 1991 revenue was derived from applications software products and associated support services.

The R/2 System is an integrated set of ten business applications modules that manage a range of strategic business applications for data-intensive corporations with numerous locations and operations.

- The R/2 System runs on IBM 370 and compatible mainframes.

- The core of the R/2 System is the Basis System, which contains development tools for the system and provides interface capabilities that allow users to access data base information in any module from anywhere in the company.

- R/2 System modules include

 - RF: Financial Accounting
 - FA: Fixed Assets
 - RK: Cost Accounting
 - RK-P: Project Planning and Control
 - RV: Sales
 - RM-PPS: Production Planning and Control
 - RM-MAT: Material Management
 - RM-QSS: Quality Assurance
 - RM-INST: Plant Maintenance
 - RP: Personnel Management

Copyright 1992 by INPUT. Reproduction Prohibited.

- Modules are available and priced separately. Pricing on the Basis System starts at $100,000, depending on configuration.

SAP America has various strategic alliances/relationships with companies that augment its sales and support efforts in the U.S. SAP Alliance partners include Andersen Consulting, CAP Gemini America, Coopers & Lybrand, Computer Task Group, Deloitte Touche, Electronic Data Systems, and Price Waterhouse.

- During 1991, SAP and Price Waterhouse established the Center of Expertise (COE), a joint service organization with dedicated staff from both Price Waterhouse and SAP. COE supports software implementations and provides a range of functional, technical, and project management services.

Industry Markets

SAP America's revenue is derived from approximately 45 clients in various industries, including oil and gas, chemical, pharmaceutical, packaged goods, process manaufacturing, discrete manufacturing, electronics, utilities, and food industries.

Customers typically are large companies requiring a company-wide business strategy rather than a disjointed collection of software applications from different vendors.

A cross-section of U.S. clients include Amoco Corporation, Applied Automation, Cincinnati Gas & Electric, Dow Chemical, E.I. Du Pont de Nemours, General Electric, Guhring, Haarmann & Reimer Corporation, Hitachi Data Systems, ICI Americas, Mannesmann Pipe & Steel, Millar, Mobil, and Teradata.

Geographic Markets

One hundred percent of SAP America's revenue is derived from the U.S.

In addition to its headquarters in Lester (PA), SAP America has a Western Region office in Redwood City (CA). Additional offices are planned.

SAP America's parent, SAP AG, is a worldwide company with subsidiaries in 14 countries.

Copyright 1992 by INPUT. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

June 1997

SAP AG

Neurottstraße 16
69190 Walldorf
Germany
Phone: **49 62 27 34 0**
Fax: **49 62 27 34 12 82**
Internet: **www.sap.com**

100 Stevens Drive
Philadelphia, PA 19113
U.S.A.
Phone: (610) 595-4900
Fax: (610) 521-6290

Chairman:	Dietmar Hopp
Status:	Public
Employees (average 1996):	9,196
Revenue:	DM Million 3,722
Fiscal Year End:	12/31/96

Key Points

- SAP is a leading Germany-based international vendor of enterprise resource planning software.
- SAP's flagship product, R/3, has become the de facto standard for this market.
- Revenue increased by 38% to $2.3 billion in 1996.
- SAP has enabled R/3 for the Euro, Year 2000 and Internet technologies.

Company Description

SAP is a leading international supplier of enterprise resource planning (ERP) application software. The company's flagship product, R/3, has been instrumental in defining the ERP market.

SAP was founded in Germany in April 1972 by five former IBM employees. In the past 25 years, the company has grown from a small regional player to a large international company with operations and partners worldwide.

In 1977, SAP was transformed into a GmbH (a closely held corporation) and won its first foreign two customers in neighboring Austria.

The SAP R/2 system was launched in 1978 and was actively marketed internationally two years later.

© INPUT 1997. Reproduction prohibited.

All brand names and product names are acknowledged to be trademarks or registered trademarks of their owners.

In 1984, SAP formed its first international company in Switzerland and by the end of 1985 the company could report customer sites in most European countries.

In 1987, SAP announced its strategy for a new generation of software, the R/3 system, which has formed the basis of the company's strong growth.

SAP continued its international expansion and during 1988 established subsidiaries in Denmark, Sweden, Italy, and the U.S. During that year, the company increased its capital stock from DM 5 million to DM 60 million and was subsequently converted into a stock corporation and floated on the market.

Since its flotation, SAP has expanded its operations globally and is now represented in over 40 countries.

Operations and Structure

SAP's operations are organized into four regions. Exhibit 1 shows these regions and the countries where SAP is represented either directly or through a partner.

In the U.S., SAP has regional offices in Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Denver, Houston, Irvine, Minneapolis, Philadelphia, Pittsburgh, Parsippany, San Fransisco, Seattle, and St. Louis. In Canada, SAP has offices in Calgary, Montreal, Ottawa, and Vancouver.

Exhibit 1

SAP AG
Country Representation, 1997

Region	Country
America	Argentina, Brazil, Canada, Chile Colombia**, Mexico, U.S. Venezuela**
Europe	Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece*, Hungary*, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Spain, Sweden, Switzerland, U.K.
Asia Pacific	Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan, Thailand
Africa/Middle East	Israel*, South Africa, Turkey*, Middle East*

** Through Partners*
*** SAP Andina*

Source: SAP AG

Exhibit 2 details SAP's executive board and the members' corporate responsibilities.

©INPUT 1997. Reproduction prohibited.

Exhibit 2

SAP AG
Executive Board, 1997

Name	Function
Dietmar Hopp	Chairman Sales & Consulting, Administration
Dr. Claus E. Heinrich	Logistics Development
Gerhard Oswald	Services, IT (CIO)
Paul Wahl	Marketing SAP America (CEO)
Prof. Dr. h. c. Hasso Plattner	Basis Development, Technology
Prof. Dr. Henning Kagermann	Financials Development
Dr. h. c. Klaus E. Tschira	Human Resources Development
Dr. Peter Zencke	Basis and Logistics Development

Source: SAP AG

Company Strategy

SAP's company strategy relates mostly to R/3, its successful enterprise application suite of software.

In order to take advantage of the high profile the company has traditionally had in the manufacturing industries, SAP has developed industry-specific solutions for fourteen industries (see the "Key Products and Services" section). The company is also continually taking steps to ensure that it has partners present in local markets with knowledge of business processes relating to the specific industries.

SAP's partner strategy plays a part in its success. The company decided early not to try to be everything to everyone but instead to concentrate mostly on developing its technologies. Among the results of this strategy are:

- Ability to cover markets without facing employee explosion and "growing pains"
- Loyalty from partners due to a consistent message ("We deliver the software, you implement and deliver the service"). Other companies, such as Oracle, have faced problems with an inconsistent partner strategy.

However, even if SAP has built up a large network of Platform, Logo, and Implementation Partners, the explosive growth of the SAP market has led to a shortage of SAP skills in many markets. Almost two years ago, SAP launched an intensive education program to train its partners' employees. Without this action, the company may have had to face a slow down in its growth.

On the product side, SAP is continually seeking to develop R/3 so that it addresses and makes use of newly available technology. R/3 is now Year 2000- and Euro-compliant and compatible with Internet and intranet technologies.

Financials

SAP announced record results for 1996, with revenue up 38% at DM 3,722 million ($2,268 million) and net profits up 40% at DM 567 million ($346 million). The results were unexpected since SAP had issued a profit warning in October on the basis of slower sales in the third quarter. This profit

©INPUT 1997. Reproduction prohibited.

warning is now at the heart of the current investigation into insider trading among a few SAP employees.

In 1996, the R/3 product continued to fuel growth with an increase in sales of 44% over 1995 to $1,445 million, while total product revenue grew by 36%. In December 1996, SAP began shipping its Internet-enabled version of R/3, which the company hopes will support its growth for 1997.

Exhibit 3 shows a summary of SAP's financial performance over the past five years.

The company expects revenue for 1997 to increase by 25% to 30%, and profits to grow by 1 or 2 percentage points above revenue growth.

Interim Results

In the first quarter of 1997, SAP had total sales of DM 1,032 million, which was an increase of 49% over the same period a year earlier. R/3 sales in the quarter rose by 52%. Pre-tax profits in the quarter increased by 54% over the same period in 1996.

Exhibit 4 shows an analysis of SAP's revenue by major activity for 1996.

Exhibit 4

SAP AG
Revenue by Activity, 1996
(DM Million)

Activity	Revenue	Percent of Total
Software Products	2,643	71%
Consulting	744	20%
Training	298	8%
Miscellaneous	37	1%
Total	3,722	100%

Source: SAP AG

In 1995, software products accounted for 72% of revenue and consulting for 19% of revenue.

Exhibit 3

SAP AG Five-Year Financial Summary
(DM Million)

Year	1992	1993	1994	1995	1996
Revenue	831	1,102	1,831	2,696	3,722
Annual Growth Rate	18%	33%	66%	47%	38%
Net Income after Tax	127	146	281	405	567
Net Income as a Percent of Revenue	15.3%	13.2%	15.3%	15.0%	15.2%
Average Number of Employees	2,935	3,444	4,596	6,443	9,196
Revenue per Employee	0.283	0.320	0.398	0.418	0.405

Source: SAP AG

©INPUT 1997. Reproduction prohibited.

Geographic Markets

SAP's revenue by region are shown in Exhibit 5.

Exhibit 5

SAP AG
Revenue by Region, 1996
(DM Million)

Region	Revenue	Percent of Total
Europe	1,810	49%
Americas	1,350	36%
Asia Pacific	486	13%
Africa/ Middle East	76	2%
Total	3,722	100%

Source: SAP AG

Revenue from the European region increased by 27% from 1995 to 1996, while revenue in the Americas grew by 47%. The Asia Pacific region was the top performer, with 67% revenue growth.

Market Analysis

Exhibit 6 provides INPUT's estimate of SAP's 1996 European revenue by service mode.

Exhibit 7 shows SAP's European revenue by vertical market. According to INPUT's estimates, the company still generates almost 50% of its revenues in its traditional manufacturing markets.

Exhibit 6

SAP AG
European Revenue by Service Mode,
($ Millions)

Service Mode	Revenue ($ Millions)	Percent of Total
Application software products	820	70
Professional services	355	30
Total European Software & Services	$1,175	100

Source: INPUT estimates

Exhibit 7

SAP AG
European Revenue by Industry Sector,
1996 ($ Millions)

Industry Sectors	Revenue ($ Millions)	Percent of Total
Discrete Manufacturing	365	31%
Process Manufacturing	200	17%
Banking & Finance	175	15%
State & Local Government	70	6%
Retail Distribution	60	5%
Insurance	55	5%
Transportation	50	4%
Wholesale Distribution	50	4%
Business Services	45	4%
Telecommunications	40	3%
Utilities	35	3%
Healthcare	30	2%
Total	$1,175	100%

Source: INPUT estimates
Percentages are rounded

©INPUT 1997. Reproduction prohibited.

Exhibit 8 shows SAP's estimated revenue by European country for 1996. Germany is still SAP's major market. However, on a worldwide basis, the company now generates around 75% of revenue outside Germany.

Exhibit 8

SAP AG
European Revenue by Country, 1996
($ Millions)

Country	Revenue ($ Millions)	Percent of Total
Germany	585	50%
Switzerland	105	9%
United Kingdom	100	9%
Austria	70	6%
Netherlands	60	5%
France	50	4%
Italy	40	3%
Belgium/Luxembourg	35	3%
Denmark	25	2%
Spain	20	2%
Sweden	20	2%
Norway	15	1%
Portugal	15	1%
Rest of Europe	35	3%
Total European Software & Services	$1,175	100%

Source: INPUT estimates
Percentages are rounded

Key Products and Services

Products

SAP's main product groups are the R/2 and R/3 standard software applications packages.

The R/2 version is aimed at mainframe operations and runs in IBM 370/390 environments, including compatibles.

The R/3 product offers the same functionality as R/2 and is based on open systems using:

- Client/server architecture
- Object-oriented development
- Graphical user interfaces

Although R/3 is SAP's most successful product, the company continues to develop and support the R/2 system. The company has a division dedicated to R/2, which is currently on version 6.1.

The R/3 system is able to handle Year 2000 and the Euro technologies. In general, it covers the following business functions:

- Cost accounting
- Financial accounting
- Fixed assets accounting
- Human resource management
- Materials management
- Plant maintenance
- Production planning and control
- Project management
- Quality assurance
- Sales order entry
- Shipping and invoicing
- Management accounting

In addition, certain cross-application features are provided, such as system management, telecommunications, e-mail, and EDI.

©INPUT 1997. Reproduction prohibited.

The R/3 system offers portability, scaleability, and interpretability. The product also includes a comprehensive development environment, an information model, and features aimed at supporting business process reengineering. SAP expects to ship early versions of R/3 4.0 in the third quarter of 1997.

Platforms supported include:

- Digital UNIX
- HP: HP-UX
- IBM: AIX, OS/400, and OS/390
- SNI: SINIX
- SUN: Solaris
- Windows NT

As well as offering a broad-based functionality in its standard packages, SAP develops and markets variants of both R/2 and R/3 to meet the specific needs of different countries and industries. Industry-specific solutions are becoming increasingly important in the ERP market. Currently, SAP's solutions for vertical markets include:

- SAP High Tech & Electronics
- SAP Consumer Products
- SAP Pharmaceuticals
- SAP Oil & Gas
- SAP Utilities
- SAP Insurance
- SAP Banking
- SAP Automotive

Services

SAP provides pre- and post-sales support in both technical and applications consultancy, software upgrade installation, and education and training. It also offers on-line help and remote diagnostics.

However, the backbone of SAP's service and support network is the company's partnerships with an extensive range of information technology and business consulting companies (see "Alliances and Acquisitions" section). SAP has over 3,000 SAP consultants and support personnel and its certified partners together have more than 20,000 SAP dedicated consultants.

A recent addition to SAP's support structure was the opening of a Service & Support center in Dublin, Ireland in February 1997. The facility will provide regional customer support and remote services to SAP's R/3 customers worldwide.

Recent Projects and Major Clients

At the end of March 1997, SAP had over 9,800 R/3 installations worldwide with more than 1.5 million users. The R/2 system is installed at about 2,000 organizations and companies.

SAP boasts a good hit rate among America's Fortune 500 companies, including many of the top 10 chemical, food, pharmaceutical, computer, petroleum, and electronics companies.

Recent additions to SAP's customer base are Hoechst Marion Roussel, Chrysler International Finance, TRW Inc., and Eskom in South Africa (one of the world's largest utility companies).

Exhibit 9 shows some of SAP's major clients worldwide.

©INPUT 1997. Reproduction prohibited.

Exhibit 9

SAP AG
A Selection of Major Clients

Vertical Market	Customer
Process Manufacturing	AGIP Elf Acquitaine Dow Chemical DuPont Exxon Corporation Hoffmann-La Roche ICI Procter & Gamble Royal Dutch Shell Group Texaco The Coca-Cola Company Total Oil
Discrete Manufacturing	AEG Allied-Signal BMW Ford Motor Company General Motors Company Hewlett-Packard IBM Lego Mitsubishi Corporation Philips Toyota Motor Corporation
Utilities	Electricite de France
Transportation	American Airlines British Rail Deutsche Bahn Deutsche Lufthansa Flughafen Frankfurt SwissAir
Telecommunications & Media	Alcatel Orange ZDF
Banking & Finance	Deutsche Bank

Source: SAP AG

©INPUT 1997. Reproduction prohibited.

Alliances and Acquisitions

On the whole, SAP's major alliances are also the company's partners, particularly the Global Logo Partners, which are shown in Exhibit 10.

Exhibit 10

SAP AG
Global Logo Partners 1997

• Andersen Consulting	• IBM
• Cap Gemini	• Deloitte & Touche/ICS
• Coopers & Lybrand	• KPMG
• Computer Sciences Corp.	• Origin
• Digital	• PLAUT
• EDS	• Price Waterhouse
• Ernst & Young	• SNI
• Hewlett-Packard	

Source: SAP AG

The company also has a network of National Logo Partners and Implementation Partners, who are represented regionally or only in selected industries.

Hardware partners include Bull, Digital, Hewlett-Packard, IBM, NCR, Sun, and SNI. Generally, partnerships with hardware vendors are based on the establishment of joint competence centers to support customers.

SAP has a range of technology partnerships with vendors of databases, operating systems, networking, and other information technology products. The aim of these partnerships is to ensure seamless integration of third-party products with SAP software solutions. SAP's Technology Partners are shown in Exhibit 11.

Exhibit 11

SAP AG
Technology Partners 1997

• Adobe	• Intel
• Apple	• iXOS
• Haht	• Microsoft
• Hewlett-Packard	• Oracle
• IBM	• Software AG
• IDS Prof. Scheer	• Sun
• Informix	

Source: SAP AG

- In June 1997, SAP announced that it would acquire a 25.2% stake in its long-standing German business partner IDS Prof. Scheer. IDS helped develop SAP's roadmap for implementing R/3. IDS has revenues of around DM 90 million ($52 million).

- In February 1997, SAP and Software AG formed a joint consulting unit, SAP Systems Integration GmbH, which is 60% owned by SAP. The company will focus on customer service for SAP corporate clients, targeting the public sector, banking, and insurance.

- In August 1996, SAP bought a 14% stake in Californian IntelliCorp Inc. SAP further has a joint development and a licensing and marketing agreement with IntelliCorp taht gives the U.S. company the right to include the R/3 Reference model with its LiveModel business modeling tool.

INPUT Assessment

SAP continues to enjoy success with its enterprise-wide business applications products, particularly the R/3 system. However, having the right services and

©INPUT 1997. Reproduction prohibited.

support structure that will enable clients to implement and take full advantage of their investment is key to SAP's continued success.

For this reason, SAP's partner networks are of the utmost importance. Partners are essential to selling, implementing and supporting new systems on a wide variety of platforms in different countries. SAP has neither the infrastructure nor, despite its strong financial position, the capital to do all of this itself. SAP needs to keep its partners content and present a coherent and loyal channel strategy—and the company seems to be doing just that.

There are a now a number of vendors eager to challenge SAP in the ERP market. However, the company has managed to make its product the de facto standard in the market, which makes life more difficult for the competition.

While SAP has been successful in gaining a good part of the Fortune 500 companies as clients, it is now increasingly looking to move into smaller companies. This is where its competitors, such as Oracle, Baan, SSA, and PeopleSoft may prove to be more successful. SAP may find that "downsizing" R/3 with its rich functionality and tight integration to business processes is a difficult task.

Nevertheless, SAP is likely to be a force to reckon with in the market for small to medium sized businesses. However, in order to enjoy success in this marketplace, the company will need to change its model for going to market. For SAP really to become a volume software company, it will need to develop a reseller program, as it already has done in the U.K.

©INPUT 1997. Reproduction prohibited.

COMPANY
PROFILE

SAS INSTITUTE INC.

SAS Campus Drive
Cary, NC 27513-2414
Phone: (919) 677-8000
Fax: (919) 677-8123

President:	James H. Goodnight
Status:	Private Corporation
Total Employees:	2,939 (2/94)
Total Revenue:	$420,300,000
Fiscal Year End:	12/31/93

Key Points

- SAS Institute Inc. is one of the world's 10 largest independent software companies.
- In 1993, 56% of all first-year license fees came from desktop revenue, surpassing first-year mainframe revenue for the first time in company history.
- During 1993, to better position itself in the client/server applications development tool market, SAS Institute strengthened its client/server offerings, released software for the three most powerful PC platforms and delivered SAS/EIS, a new object-oriented applications development/EIS tool.
- During 1993, SAS Institute opened regional offices in Atlanta (GA), Orlando (FL) and Denver (CO) as well as its first Middle East branch office in Dubai, United Arab Emirates.

Copyright 1994 by INPUT. Reproduction Prohibited.

Company Description

SAS Institute Inc., incorporated in 1976, develops, supports and maintains systems and applications software products. The company's flagship product, the SAS[R] System, is an integrated information delivery system for enterprise-wide data access, management, analysis, and presentation.

Strategy

SAS Institute is committed to multiplatform computing and a client/server strategy.

A key priority for SAS Institute is to continuously strengthen its client/server architecture since more than two-thirds of all SAS software sites are running the SAS System in multiple environments.

- New releases of the SAS System provide both data and compute services to include front-end and back-end tools for accessing data from a variety of sources--both relational and nonrelational--across multiple architectures.
- In addition, the SAS System exploits the computer resources of the server hardware to make better use of all available resources and deliver the information in a form most appropriate to the needs of the computer user through graphic user interfaces and executive information system interfaces.
- During 1993, SAS Institute continued to round out its desktop offerings by shipping new or enhanced releases of the SAS System for Windows 3.1, OS/2 2.0 and Windows NT. Sales of software for these platforms and the UNIX and DOS markets contributed to a 37% increase in total desktop revenue during 1993.

Financials

Total 1993 revenue reached $420.3 million, a 15% increase over 1992 revenue of $365.5 million, marking SAS Institute's 17th consecutive year of double-digit growth. SAS Institute has been profitable since its formation in 1976. A five-year revenue summary follows:

SAS INSTITUTE INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	1993	1992	1991	1990	1989
Revenue	$420.3	$365.5	$295.1	$240.2	$205.6
· Percent increase from previous year	15%	24%	23%	17%	21%

Copyright 1994 by INPUT. Reproduction Prohibited.

SAS Institute management attributes revenue growth in 1993 to continued escalation of SAS System sales as more organizations seek enterprise-wide client/server applications development tools.

- Sales from desktop software have continued to generate a larger portion of SAS Institute's revenue. In 1993, 56% of all first-year license fees came from desktop revenue, compared to 39% in 1992, 34% in 1991 and 23% in 1990.
- Total sales for the SAS System for Windows surpassed $26 million in 1993.
- The release and immediate acceptance of SAS/EIS also contributed to 1993 results. In its first eight months of release, SAS/EIS software generated close to $2 million for SAS Institute and had been installed in more than 800 organizations worldwide.
- Revenue in the U.S. grew more than 25%, while Canadian sales rose about 4%. SAS Institute's European operations posted a 16% increase (in local currency), while the Asia/Pacific division had revenue growth of more than 13%.

Research and development expenses were approximately $143 million (34% of revenue) in 1993, $128 million (35% of revenue) in 1992 and $103 million (35% of revenue) in 1991.

Market Financials

SAS Institute's 1993 revenue was derived from clients in all industries, including many Fortune 1000 companies. Approximately 66% of clients are businesses (including 98% of the Fortune 100), 18% are universities and 16% are government agencies.

SAS Institute's commercial clients represent a range of industries, including aerospace and military commodities, airlines, agriculture and forest products, appliances and household durables, autos and automotive products, banking, beverages and food products, tobacco, broadcasting and publishing, business and public services, chemicals, construction and housing, data processing and reproduction, electric and gas utilities, electrical and electronics, energy equipment and services, energy sources, financial services, health and personal care, industrial components, insurance, leisure and tourism, machinery and engineering, merchandising, metals and steel, pharmaceuticals, recreation and other consumer goods, road and rail transportation, telecommunications, wholesale and international trade.

Copyright 1994 by INPUT. Reproduction Prohibited.

Geographic Markets

Approximately 53% of SAS Institute's 1993 revenue was derived from the U.S. and 47% from international sources. A three-year summary of geographic source of revenue follows:

SAS INSTITUTE INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1993		1992		1991	
GEOGRAPHIC AREA	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
U.S.	$222.8	53%	$178.1	49%	$144.6	49%
Europe	140.6	33%	135.2	37%	107.0	36%
Asia/Pacific	40.3	10%	35.5	10%	29.2	10%
Canada	14.0	3%	13.5	4%	11.7	4%
Other	2.5	1%	3.1	--	2.8	1%
TOTAL	**$420.3**	**100%**	**$365.5**	**100%**	**$295.1**	**100%**

Operations/ Structure

In addition to its headquarters in Cary (NC), SAS Institute has regional offices in Atlanta, (GA), Austin (TX), Denver (CO), Chicago (IL), Irvine (CA), Kansas City (KS), New York (NY), Orlando (FL), Seattle (WA) and Washington, D.C.

SAS Institute operates subsidiaries in Australia, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Italy, Japan, Korea, Malaysia, Mexico, the Middle East, the Netherlands, New Zealand, Norway, People's Republic of China, Philippines, Poland, Singapore, Slovenia, Spain, Sweden, Switzerland, Taiwan and the U.K.

SAS Institute also has distributors in Argentina, Brazil, Chile, Columbia, Egypt, Greece, Hungary, India, Ireland, Israel, Pakistan, Panama, Peru, Portugal, Puerto Rico, Saudi Arabia, Thailand, Turkey, Uruguay and Venezuela.

Employees

As of February 1994, SAS Institute had 2,939 full-time employees (1,986 U.S. and 953 international).

Copyright 1994 by INPUT. Reproduction Prohibited.

Key Products and Services

SAS derived approximately 90% of its 1993 revenue from software products and related services. Consulting and education services accounted for approximately 10% of revenue.

With more than 3 million users in 119 countries, SAS software products are installed at 26,661 sites, up from 25,691 sites in 1992 and 23,025 sites in 1991. A three-year summary of the total number of installed products, by processor, follows:

SAS INSTITUTE INC.
THREE-YEAR PRODUCT INSTALLATION SUMMARY

	TOTAL NUMBER OF PRODUCT INSTALLATIONS AT YEAR END		
HARDWARE PLATFORM	1/1994	1/1993	1/1992
Mainframes	31,737	32,766	33,945
Minicomputers	15,070	15,426	16,396
UNIX	200,000	194,000	53,000
Personal computers	655,000	633,500	545,000

SAS Institute's current software products are outlined in the exhibit on the following page.

The SAS System is an integrated suite of software products for enterprise-wide information delivery that provides organizations with tools to access, manage, analyze and present their data with an application development environment.

- The SAS System has been designed to support effective information delivery by:
 - Providing universal data access
 - Increasing the capabilities and breadth of applications in the software
 - Providing user interfaces to match user needs and experience
 - Supporting and exploiting the advantages of computer hardware platforms.

Copyright 1994 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed
SAS System			
- Base SAS	Foundation of SAS System, for data access, management, analysis and presentation	1976	26,773
- SAS/FSP®	Full-screen product for data entry, retrieval and letter writing	1981	13,935
- SAS/AF®	Interactive facility for application development, computer-based training and on-line help systems	1985	9,280
- SAS/GRAPH®	High-resolution color graphics	1980	17,935
- SAS/OR®	Project management and operations research	1983	2,612
- SAS/QC®	Tool for statistical quality improvement	1986	2,840
- SAS/ETS®	Econometric, time series analysis tool	1980	6,385
- SAS/IML®	Interactive matrix programming facility	1985	4,407
- SAS/STAT®	Full-function statistical analysis	1986	18,208
- SAS/SHARE®	Multiple-user access tool for concurrent updating of SAS data libraries	1987	742
- SAS/CPE®	Computer performance evaluation tool	1989	156
- SAS/ACCESS®	Interfaces for linking SAS System with various databases	1989	4,500
- SAS/RTERM®	Terminal emulation and high-resolution graphics	1985	162
- SAS/ASSIST®	Menu-driven interface to SAS System tools	1988	6,695
- SAS/CONNECT®	Cooperative and distributive processing	1990	4,620
- SAS/INSIGHT™	Interactive statistical graphics	1990	2,543

(continued)

Copyright 1994 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed
SAS System *(cont.)*			
- SAS/ENGLISH™	Natural language interface	1992	90
- SAS/LAB™	Statistical and graphical data analysis for scientists and engineers	1992	491
- SAS/CALC™	Electronic spreadsheet	1992	922
- SAS/EIS™	Executive information system development tool	1992	982
- SAS/TOOLKIT™	Tools for user-written procedures	1992	145
- SAS/PH-Clinical™	Clinical data review	1992	15
SAS/C® Compiler	Mainframe C compiler	1985	700
SAS/C C++ Development System	Development tool for mainframes	1993	30
SAS/C Compiler for AmigaDOS	Microcomputer C compiler	1990	15,000
JMP®	Macintosh statistical visualization product	1989	2,500
SYSTEM 2000®	Database management system	1984	350

- The SAS System is grouped into modular components that give organizations the opportunity to obtain only the functions they need. As organizations' needs grow, they can add additional SAS System components.

- Capabilities within the SAS System include EIS, spreadsheets, graphics, data analysis, report writing, quality improvement, project management, computer performance evaluation, client/server computing, database access, decision support, applications development and more.

- The SAS System's MultiVendor Architecture™ (MVA™) maximizes the system's ease of migration from one operating environment to another. With MVA, the SAS System is a vendor-independent system that runs similarly across all environments the SAS System supports.

Copyright 1994 by INPUT. Reproduction Prohibited.

- The SAS System supports mainframes (MVS, CMS, VSE), minicomputers (OpenVMS, AOS/VS, PRIMOS), UNIX workstations (SunOS, HP-UX, AIX, DG/UX, RISC/ULTRIX, RISC/os, DOMAIN/OS, NeXT, IRIX), personal computers (DOS, OS/2, Windows, Windows NT) and supercomputers (ConvexOS).

SYSTEM 2000 runs on IBM 370, 390, 30XX, 43XX, 93XX, and compatible computers under OS, CMS, DOS/VS, DOS/VSE, and in conjunction with CICS; the Unisys Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

Recent product announcements include the following:

- Releasing the SAS System for the three most powerful personal computing platforms--Windows 3.1, OS/2 2.0 and Windows NT--as well as releases for MVS, CMS, VSE and OpenVMS
- Shipping a new release of the SAS System to AIX, HPPA, Solaris and ULTRIX sites
- Releasing SAS/EIS software, an object-oriented development environment for creating user-friendly executive information systems
- Releasing the SAS System for DEC's Alpha AXP running Open VMS and Microsoft's Windows NT
- Unveiling the SAS System for supercomputers with its release for Convex C Series' ConvexOS
- Delivering software for managing and analyzing UNIX systems and networks--SAS/CPE software for Open Systems
- Releasing C++ development tools for the mainframe--the SAS/C C++ Development System

The company licenses all software products on an annual basis (with the exception of the JMP family of products).

- License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed. Renewals are available at lower rates.
- Technical support, enhancements and one set of documentation are included in the annual license fee.
- Discounts are available to degree-granting institutions.

Copyright 1994 by INPUT. Reproduction Prohibited.

Customer Services:

SAS Institute offers free software updates and enhancements; phone-in technical support; 24-hour on-line support; consulting services; instructor-, video- and computer-based training courses; documentation; quarterly technical journals; a network of local, regional, national and international users groups; and a free quarterly newsmagazine.

Instructor training is available at the Institute Training Center in Cary (NC) and at SAS Institute regional offices. Instruction is also held at customer sites and hotel and conference centers across the U.S.

Clients

Some of SAS Institute's announced customers include Alcoa, Amoco, Avon, BASF, Data General, DEC, Duke University, Exxon, Glaxo, Harvard University, Hewlett-Packard, IBM, MCI, Monsanto, Pfizer, Rolm and Haas, Rolls Royce, Shell Oil, Sun Microsystems, 3M, Upjohn and the U.S. Bureau of the Census.

Marketing and Sales

SAS Institute markets its products in the U.S. through a direct sales force.

Outside the U.S., the company markets its products through subsidiaries and distributors.

Alliances

SAS Institute maintains strategic and cooperative relationships with a number of hardware and software vendors, including the following:

- IBM Corporation: SAS Institute has had a formal business relationship with IBM since 1988 and was one of the first independent software companies to fully endorse IBM's SAA. SAS Institute has a joint development agreement with IBM for the ESA/390 architecture and is an IBM Business Partner through the Cooperative Software Program on the RS/6000 in the RISC/AIX arena and for VSE/ESA and VSE/SP environments in the U.S. and Canada. The Institute is also working with IBM in the UNIX market to provide a complete hardware/software solution for distributed application processing.

- Digital Equipment Corporation: SAS Institute became a Digital Cooperative Marketing Partner in 1987. The alliance covers OpenVMS on VAX systems and ULTRIX on RISC-based systems. Since 1990, SAS Institute and DEC have been working together on

Copyright 1994 by INPUT. Reproduction Prohibited.

DEC's 64-bit Alpha AXP RISC systems and SAS Institute has been working on an implementation of the SAS System to support Alpha.

- Sun Microsystems: SAS Institute is a Catalyst Premier Partner and is involved with Sun in joint technology exchanges, joint marketing and communications programs.

- Hewlett-Packard: SAS Institute is a member of the HP Channel Partner program.

Other vendors with whom SAS Institute has business relationships include the following:

- Hardware vendors: Apple, Bull Systems, Compaq, Control Data, Convex Computer, Data General, Fujitsu, Hitachi, ICL, Intel, Motorola, NCR (AT&T Global Solutions), CEC, Olivetti Advanced Technology Center, Pyramid Technology, Sequent, Silicon Graphics, Siemens Nixdorf, Sony Microsystems, Tandem and Teradata.

- Software vendors: Borland, Bitstream, Cincom Systems, Computer Associates, S&P ComStock, Geographic Data Technology, Informix, Interleaf, Lotus Development, Microsoft, NeXT, Oracle, Software AG and Sybase.

- Peripherals vendors: Attachmate, CalComp, Digital Communication Associates, Eastman Kodak, Novell, QMS, Seiko Instruments USA, Tektronix, Talaris Systems, Xerox and Zephyr Development.

Competitors

SAS Institute's principal competitors, by specific application area, include the following:

- Data management: Information Builders' FOCUS

- Graphics: Computer Associates' DISSPLA and TELL-A-GRAF

- Statistical analysis: SPSS

- Database management systems: Information Builders' FOCUS, Computer Associates' RAMIS, and Must Software International's NOMAD

- C compiler products: IBM

- EIS: Comshare, Information Resources Inc., Pilot Executive Software

Copyright 1994 by INPUT. Reproduction Prohibited.

SAS INSTITUTE INC.
SAS Campus Drive
Cary, NC 27513-2414
(919) 677-8000

James H. Goodnight, President
Private Corporation
Total Employees: 2,380 (2/92)
Total Revenue, Fiscal Year End 12/31/91: $295,100,000

The Company

SAS Institute Inc., incorporated in 1976, develops, supports, and maintains systems and applications software products. The company's flagship product, the SAS[R] System, is an integrated information delivery system for enterprise-wide data access, management, analysis, and presentation.

Total 1991 revenue reached $295.1 million, a 23% increase over 1990 revenue of $240.2 million. SAS Institute has been profitable since its formation in 1976. A five-year revenue summary follows:

SAS INSTITUTE INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	1991	1990	1989	1988	1987
Revenue	$295.1	$240.2	$205.6	$170.4	$135.3
· Percent increase from previous year	23%	17%	21%	26%	32%

SAS Institute management attributes revenue growth in 1991 to the following:

- Revenue from UNIX-based products increased 170% over 1990. In other environments, revenue from SAS software on mainframes increased about 18%; revenue rose 25% in the PC (DOS and OS/2) arena; and revenue for the SAS System under DEC VMS and RISC/ULTRIX platforms rose 20%.

 - During 1991, SAS Institute released its software for seven new UNIX platforms--DEC's RISC/ULTRIX, IBM's AIX, Apollo's DOMAIN/os, Data General's DG/UX, MIPS' RISC/os, Silicon Graphics' IRIX, and NeXT Computer's NeXTstep.

Copyright 1992 by INPUT. Reproduction Prohibited.

- The company further enhanced its UNIX releases to users by adding a new component to the SAS System--SAS/INSIGHT software for graphical data analysis--which was first made available for the UNIX environment. SAS/INSIGHT software has since been made available on other platforms.

- Revenue in the U.S. grew about 18%, while Canadian sales rose 17%. The European division posted a 33% increase, while the Asia/Pacific division had a 28% revenue growth.

Approximately 35% of total revenue was devoted to research and development during 1991.

As of February 1992, SAS Institute had 2,380 employees, segmented approximately as follows:

U.S.

Marketing and sales	281
Software services and customer support	374
Research and development	511
Computer operations	139
General and administrative	375
	1,680
International	700
	2,380

SAS Institute's principal competitors, by specific application area, include the following:

- Data management: Information Builders' FOCUS
- Graphics: Computer Associates' DISSPLA and TELL-A-GRAF
- Statistical analysis: SPSS
- Data base management systems: Information Builders' FOCUS, On-Line Software International's RAMIS, and Must Software International's NOMAD
- C compiler products: IBM

Copyright 1992 by INPUT. Reproduction Prohibited.

Key Products and Services

SAS derived approximately 90% of its 1991 revenue from software products and related services. Consulting and education services accounted for approximately 10% of revenue.

The company's current software products are outlined in the exhibit on the following page. With more than 3 million users in 105 countries, SAS software products are installed at 23,025 sites. As of January 1992, the total number of installed products, by processor, included:

Mainframes	33,945
Minicomputers (including 15,697 VMS sites)	16,396
UNIX-based workstations	53,000
Microcomputers	545,000

The SAS System includes more than 125 built-in applications groups in modular components. These applications provide capabilities for executive information systems; data entry, retrieval, and management; report writing and graphics; statistical and mathematical analysis; business planning, forecasting, and decision support; operations research and project management; quality improvement; computer performance evaluation; and applications development.

- The SAS System's MultiVendor Architecture™ (MVA™) maximizes the system's ease of migration from one operating environment to another. With MVA, the SAS System is a vendor-independent system that runs similarly across all environments the SAS System supports.

- The SAS System supports mainframes (MVS, CMS, VSE), minicomputers (VMS, AOS/VS, PRIMOS), UNIX workstations (SunOS, HP-UX, AIX, DG/UX, RISC/ULTRIX, RISC/os, DOMAIN/OS, NeXT, IRIX), and personal computers (PC DOS, MS-DOS, OS/2).

SYSTEM 2000 runs on IBM 370, 390, 30XX, 43XX, 93XX, and compatible computers under OS, CMS, DOS/VS, DOS/VSE, and in conjunction with CICS; the Unisys Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

Copyright 1992 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed
SAS System			
- Base SAS	Foundation of SAS System, for data access, management, analysis, and presentation	1976	23,359
- SAS/FSP®	Full-screen product for data entry, retrieval, and letter writing	1981	11,502
- SAS/AF®	Interactive facility for application development, computer-based training, and on-line help systems	1985	7,545
- SAS/GRAPH®	High-resolution color graphics	1980	15,794
- SAS/OR®	Project management and operations research	1983	2,239
- SAS/QC®	Tool for statistical quality improvement	1986	2,073
- SAS/ETS®	Econometric, time series analysis tool	1980	5,489
- SAS/IML®	Interactive matrix programming facility	1985	3,670
- SAS/STAT®	Full-function statistical analysis	1986	15,264
- SAS/SHARE®	Multiple-user access tool for concurrent updating of SAS data libraries	1987	648
- SAS/CPE®	Computer performance evaluation tool	1989	131
- SAS/REPLAY-CICS®	Graphics manager for CICS users implementing SAS/GRAPH	1983	25
- SAS/ACCESS®	Interfaces for linking SAS System with various data bases	1989	2,757
- SAS/RTERM®	Terminal emulation and high-resolution graphics	1985	295
- SAS/ASSIST®	Menu-driven interface to SAS System tools	1988	6,600
- SAS/CONNECT®	Cooperative and distributive processing	1990	4,234
- SAS/INSIGHT™	Interactive statistical graphics	1990	545

(continued)

Copyright 1992 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed
SAS System *(cont.)*			
- SAS/ENGLISH™	Natural language interface	1992	New product
- SAS/LAB™	Statistical and graphical data analysis for scientists and engineers	1992	New product
- SAS/CALC™	Electronic spreadsheet	1992	66
- SAS/EIS™	Executive information system development tool	1992	New product
- SAS/TOOLKIT™	Tools for user-written procedures	1992	New product
- SAS/PH-Clinical™	Clinical data review	1992	New product
SAS/C® Compiler	Mainframe C compiler	1985	757
SAS/C Compiler for AmigaDOS	Microcomputer C compiler	1990	14,375
JMP®	Macintosh statistical visualization product	1989	2,072
JMP Design™	Classical design of experiments	1992	New product
SYSTEM 2000®	Data base management system	1984	340

Recent announcements include the following:

- SAS Institute is assisting DEC with the Alpha VMS project, DEC's new 64-bit RISC processors.
- In early 1992, SAS Institute announced its first vertical market software product, SAS/PH-Clinical.
- Also in early 1992, SAS Institute expanded its SAS/ACCESS software family with interfaces for linking the SAS System with Computer Associates' CA-DATACOM/DB, Software AG's ADABAS, IBM's IMS, and ASK's INGRES.
- In January 1992, SAS Institute announced its latest release of the SAS System for Information Delivery (Release 6.07). The new version of the SAS System extends its data access, management, analysis, and presentation capabilities.

Copyright 1992 by INPUT. Reproduction Prohibited.

The company licenses all software products on an annual basis (with the exception of the JMP family of products). License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed. Renewals are available at lower rates. Discounts are available to degree-granting institutions.

Technical support, enhancements, and one set of documentation are included in the annual license fee. Users also receive a quarterly news magazine free of charge.

SAS Institute offers a range of instructor, video, and computer-based training, as well as trainers' kits. Instructor training is available at the Institute Training Center in Cary (NC) and at facilities in Austin (TX), Rockville (MD), Chicago (IL), New York City (NY), Irvine (CA), and Toronto. Instruction is also held at customer sites, and hotel and conference centers across the U.S.

Industry Markets

SAS Institute's 1991 revenue was derived from clients in all industries, including many Fortune 1000 companies. Approximately 71% of clients are businesses (including 98% of the Fortune 100), 16% are universities, and 13% are government agencies.

Some of SAS Institute's announced customers include Alcoa, Amoco, Avon, BASF, Data General, DEC, Duke University, Exxon, Glaxo, Harvard University, Hewlett-Packard, IBM, MCI, Monsanto, Pfizer, Rolm and Haas, Rolls Royce, Shell Oil, Sun Microsystems, 3M, Upjohn, and the U.S. Bureau of the Census.

Geographic Markets

SAS Institute's 1991 revenue was derived approximately as follows:

U.S.	49%
Europe	36%
Asia/Pacific	10%
Canada	4%
Other	1%
	100%

In January 1992, SAS Institute opened a New York City regional office to better address the needs of its customer base in the Northeastern U.S. In addition to New York City, SAS Institute has offices in Cary (NC), Austin (TX), Irvine (CA), Chicago (IL), and Rockville (MD).

Copyright 1992 by INPUT. Reproduction Prohibited.

SAS Institute operates subsidiaries in Taiwan, Germany, the U.K., Canada, Australia, France, Japan, Italy, Sweden, Denmark, Finland, Norway, Switzerland, Belgium, the Netherlands, Spain, New Zealand, Korea, the Philippines, Singapore, Hong Kong, Malaysia, and China.

SAS Institute also has distributors located in Saudi Arabia, Israel, Venezuela, Brazil, Peru, Puerto Rico, Columbia, Uruguay, Turkey, Yugoslavia, Portugal, Greece, Argentina, Chile, Mexico, Thailand, Guatemala, Hungary, Nigeria, Pakistan, and Panama.

Computer Hardware and Software

SAS has the following equipment installed at its headquarters:

- IBM 3081, VM
- IBM 3084, MVS
- IBM 4341 (370 model)
- DEC VAX 8700, VMS
- DEC VAX 11/750, VMS
- DEC MicroVAX IIs, MicroVMS
- Data General ECLIPSE MV/8000
- Prime 9955
- HP 9000/840
- HP 9000/550
- HP 3000
- Apollo workstations
- IBM PC/ATs
- NeXT systems

Copyright 1992 by INPUT. Reproduction Prohibited.

SAS INSTITUTE INC.
SAS Campus Drive
Cary, NC 27513-2414
(919) 677-8000

James H. Goodnight, President
Private Corporation
Total Employees: 2,200 (1/91)
Total Revenue, Fiscal Year End
12/31/90: $240,200,000

The Company

SAS Institute Inc., incorporated in 1976, develops, supports, and maintains systems and applications software products. The company's flagship product, the SAS[R] System, is an integrated applications system for data access, management, analysis, and presentation.

- During 1984, SAS Institute acquired SYSTEM 2000[R] Data Management Software from Intel Corporation.
- In January 1987, SAS Institute acquired Lattice, Inc. of Lombard (IL). The acquisition is the culmination of a relationship that began in 1984 when SAS Institute acquired the right to implement a mainframe version of Lattice's microcomputer C compiler. Lattice now operates as a subsidiary of SAS Institute.
- In August 1988, SAS Institute acquired Neo-Visuals, Inc. of Toronto. Neo-Visuals developed high-end, three-dimensional graphics and animation software for the industrial design, CAD/CAM, engineering, and high-end, 3D presentation and broadcast markets.
- In June 1989, SAS Institute announced the formation of SAS Consulting Services Inc., a subsidiary based in Rockville (MD) that provides consulting professional services to its SAS software users.

Total 1990 revenue reached $240.2 million, a 17% increase over 1989 revenue of $205.6 million. SAS Institute has been profitable since its formation in 1976. A five-year revenue summary follows:

Copyright 1991 by INPUT. Reproduction Prohibited.

SAS INSTITUTE INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	1990	1989	1988	1987	1986
Revenue	$240.2	$205.6	$170.4	$135.3	$102.4
• Percent increase from previous year	17%	21%	26%	32%	36%

SAS Institute management attributes revenue growth in 1990 to:

- The release of the "new" SAS[R] Applications System for mainframes and minicomputers
- The introduction of SAS/ASSIST[R] software (a menu-driven interface)

The company considers itself primarily a research firm and devotes an unprecedented 55% of its revenue and over 30% of its employees to research and development, while only 10% of its revenue is devoted to marketing.

In February 1991, SAS Institute and Computer Associates signed a Cooperative Development Partners agreement whereby the two companies will develop compatible software products for their mutual user bases. Projects initially scheduled for development are two interface products to link the current version of the SAS System under MVS with the CA-DATACOM and CA-IDMS data base management systems.

As of January 1991, SAS Institute had 2,200 employees segmented approximately as follows:

U.S.

Marketing and sales	261
Software services and customer support	363
Research and development	481
Computer operations	130
General and administrative	365
	1,600
International	600
	2,200

Copyright 1991 by INPUT. Reproduction Prohibited.

SAS Institute's principle competitors, by specific application area, include the following:

- Data management: Information Builders' FOCUS
- Graphics: Computer Associates' DISSPLA and TELL-A-GRAF
- Statistical analysis: SPSS
- Data base management systems: Information Builders' FOCUS, On-Line Software International's RAMIS, and Must Software International's NOMAD
- C compiler products: IBM

Key Products and Services

SAS derived approximately 90% of its fiscal 1990 revenue from software products and related services. Consulting and education services accounted for approximately 10% of revenue.

The company's current software products are outlined in the exhibit on the following page. With more than 2 million users in 88 countries, SAS software products are installed at 20,565 sites. As of January 31, 1991, the total number of installed products, by processor, included:

Mainframes	33,462
Minicomputers (including 14,551 VMS sites)	15,373
UNIX-based workstations	28,400
Microcomputers	545,000

The SAS System includes more than 125 built-in applications groups in modular components. These applications provide capabilities for data entry, retrieval, and management; report writing and graphics; statistical and mathematical analysis; business planning, forecasting, and decision support; operations research and project management; and applications development.

- The SAS System's MultiVendor Architecture™ (MVA™) maximizes the system's ease of migration from one operating environment to another. With MVA, the SAS System is a vendor-independent system that runs similarly across all environments the SAS System supports.

Copyright 1991 by INPUT. Reproduction Prohibited.

EXHIBIT

Product	Description	Year Introduced	Number Installed
SAS System - Base SAS	Foundation of SAS System, for data access, management, analysis, and presentation	1976	20,565
- SAS/FSP®	Full-screen product for editing, query, letter writing, and spreadsheets	1981	9,452
- SAS/AF®	Interactive facility for application development, computer-based training, and on-line help systems	1985	6,166
- SAS/GRAPH®	High-resolution color graphics	1980	13,568
- SAS/OR®	Project management, operations research, scheduling, and linear programming tool	1983	1,871
- SAS/QC®	Tool for statistical quality control	1986	1,503
- SAS/ETS®	Econometric, time series analysis tool	1980	4,610
- SAS/IML®	Interactive matrix programming facility	1985	2,903
- SAS/STAT®	Full-function statistical analysis	1986	12,028
- SAS/SHARE®	Multiple-user access tool for concurrent updating of SAS data libraries	1987	604
- SAS/CPE®	Computer performance evaluation tool	1989	124
- SAS/REPLAY-CICS®	Graphics manager for CICS users implementing SAS/GRAPH	1983	25
- SAS/DMI®	Interface between SAS System under OS and IBM's ISPF	1985	250
- SAS/ACCESS®	Interfaces for linking SAS System with various data bases	1989	1,426
- SAS/RTERM®	Terminal emulation and high-resolution graphics	1985	295
- SAS/ASSIST®	Menu-driven interface to basic SAS tools	1988	6,600
- SAS/CONNECT	Cooperative and distributive processing	1990	3,919
- SAS/INSIGHT	Interactive statistical graphics	1990	N/A
JMP™	Macintosh statistical visualization product	1989	2,072
SYSTEM 2000®	Data base management system	1984	340
SAS/C® Compiler	Mainframe C compiler	1985	686
SAS/C Compiler for AmigaDOS	Microcomputer C compiler	1990	14,375

Copyright 1991 by INPUT. Reproduction Prohibited.

- The SAS System is available for a range of computers under various operating systems, including MVS, VM, VSE, VMS, PRIMOS, AOS/VS, HP-UX, SunOS, MS-DOS, PC DOS, and OS/2.

SAS Institute previewed several SAS products at its annual SAS Users Group International conference this month. The products, which are scheduled for release later this year, include the following:

- SAS/EIS®, an executive information system
- SAS System for Windows
- SAS/CALC™ electronic spreadsheet
- SAS/LAB™, for scientists and engineers
- SAS/NVISION™, for three-dimensional graphics

SYSTEM 2000 runs on IBM 370, 30XX, 43XX, 93XX, and compatible computers under OS, CMS, DOS/VS, DOS/VSE, and in conjunction with CICS; the Unisys Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

The company licenses all software products on an annual basis. License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed. Renewals are available at lower rates. Discounts are available to degree-granting institutions.

Technical support, enhancements, and one set of documentation are included in the annual license fee. Users also receive a quarterly news magazine free of charge.

SAS Institute offers a range of instructor, video, and computer-based training, as well as trainers' kits. Instructor training is available at the Institute Training Center in Cary (NC) and at facilities in Austin (TX), Rockville (MD), Lombard (IL), Irvine (CA), and Toronto. Instruction is also held at customer sites, and hotel and conference centers across the U.S.

Industry Markets

SAS Institute's 1990 revenue was derived from clients in all industries, including many Fortune 1000 companies.

Geographic Markets

Approximately 56% of SAS Institute's 1990 revenue was derived from the U.S. and Canada and 44% from international sources.

Copyright 1991 by INPUT. Reproduction Prohibited.

U.S. offices are located in Cary (NC), Austin (TX), Irvine (CA), Lombard (IL), and Rockville (MD).

SAS Institute operates subsidiaries in Taiwan, Germany, the U.K., Canada, Australia, France, Japan, Italy, Sweden, Denmark, Finland, Norway, Switzerland, Belgium, the Netherlands, Spain, New Zealand, Korea, the Philippines, Singapore, Hong Kong, and Malaysia.

SAS Institute also has distributors located in Saudi Arabia, Israel, Venezuela, Brazil, Peru, Puerto Rico, Columbia, Uruguay, Turkey, Yugoslavia, Portugal, Greece, Argentina, Chile, Mexico, and Thailand.

Computer Hardware and Software

SAS has the following equipment installed at its headquarters:

- 1 IBM 3081, VM
- 1 IBM 3084, MVS
- 1 IBM 4341 (370 model)
- 1 DEC VAX 8700, VMS
- 1 DEC VAX 11/750, VMS
- 2 DEC MicroVAX IIs, MicroVMS
- 1 Data General ECLIPSE MV/8000
- 1 Prime 9955
- 1 HP 9000/840
- 1 HP 9000/550
- 1 HP 3000
- Apollo workstations
- IBM PC/ATs

Copyright 1991 by INPUT. Reproduction Prohibited.

SAS INSTITUTE INC.
SAS Circle, Box 8000
Cary, NC 27512-8000
(919) 677-8000

James H. Goodnight, President
Private Corporation
Total Employees: 2,000 (2/90)
Total Revenue, Fiscal Year End
12/31/89: $205,600,000

The Company

SAS Institute Inc., incorporated in 1976, develops, supports, and maintains systems and applications software products. The company's flagship product, the SAS[R] System, is an integrated applications system for data access, management, analysis, and presentation.

- During 1984, SAS Institute acquired SYSTEM 2000[R] Data Management Software from Intel Corporation.
- In January 1987, SAS Institute acquired Lattice, Inc. of Lombard (IL). The acquisition is the culmination of a relationship that began in 1984 when SAS Institute acquired the right to implement a mainframe version of Lattice's microcomputer C compiler. Lattice now operates as a subsidiary of SAS Institute.
- In August 1988, SAS Institute acquired Neo-Visuals, Inc. of Toronto. Neo-Visuals developed high-end, three-dimensional graphics and animation software for the industrial design, CAD/CAM, engineering, and high-end, 3D presentation and broadcast markets.
- In June 1989, SAS Institute announced the formation of SAS Consulting Services Inc., a subsidiary based in Rockville (MD) that provides consulting professional services to its SAS software users.

Total 1989 revenue reached $205.6 million, a 21% increase over 1988 revenue of $170.4 million. SAS Institute has been profitable since its formation in 1976. A five-year revenue summary follows:

Copyright 1990 by INPUT. Reproduction Prohibited.

SAS INSTITUTE INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	1989	1988	1987	1986	1985
Revenue	$205.6	$170.4	$135.3	$102.4	$75.1
• Percent increase from previous year	21%	26%	32%	36%	N/A

SAS Institute management attributes revenue growth in 1989 to the introduction of several software interface products, the extension of all the functionality of the SAS System to PC and UNIX environments, the enhancement of its C compiler product, and growing user recognition of the SAS System as an applications system for a range of applications.

- In U.S. dollars, revenue increased 21% in European markets and 13% in Asia/Pacific markets.

- During 1989, the company achieved a 50% increase in sales of DEC VMS-based minicomputer products.

The company considers itself primarily a research firm and devotes an unprecedented 55% of its revenue and over 30% of its employees to research and development, while only 10% of its revenue is devoted to marketing.

As of February 1990, SAS Institute had 2,000 employees segmented approximately as follows:

U.S.

Marketing and sales	241
Software services and customer support	346
Research and development	451
Computer operations	120
General and administrative	346
	1,504
International	496
	2,000

Copyright 1990 by INPUT. Reproduction Prohibited.

SAS Institute's principle competitors, by specific application area, include the following:

- Data management: Information Builders' FOCUS
- Graphics: Computer Associates' DISSPLA and TELL-A-GRAF
- Statistical analysis: SPSS
- Data base management systems: Information Builders' FOCUS, On-Line Software International's RAMIS, and Must Software International's NOMAD
- C compiler products: IBM

Key Products and Services

SAS derived approximately 89% of its fiscal 1989 revenue from software products and related services. Consulting and education services accounted for approximately 11% of revenue.

The company's current software products are outlined in the exhibit on the following page. With more than 2 million users in 88 countries, SAS software products are installed at 18,300 sites. As of February 1990, the total number of installed products, by processor, included:

Mainframes	27,400
Minicomputers (including 9,400 VMS sites)	10,100
UNIX-based workstations	2,200
Microcomputers	480,000

The SAS System includes more than 125 built-in applications groups into logical, modular components. These applications provide capabilities for data entry, retrieval, and management; report writing and graphics; statistical and mathematical analysis; business planning, forecasting, and decision support; operations research and project management; and applications development

- The SAS System's MultiVendor Architecture™ (MVA™) maximizes the system's ease of migration from one operating environment to another. With MVA, the SAS System is a vendor-independent system that runs similarly across all environments the SAS System supports.

Copyright 1990 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed
SAS System • Base SAS	Foundation of SAS System - Tool for data management, analysis, and report writing	1976	18,300
• SAS/FSP®	Full-screen product for editing, query, letter writing, and spreadsheets	1981	7,900
• SAS/AF®	Interactive facility for application development, computer-based training, and on-line help systems	1985	5,000
• SAS/GRAPH®	Color graphics package	1980	11,700
• SAS/OR®	Project management, operations research, scheduling, and linear programming tool	1983	1,600
• SAS/QC®	Tool for statistical quality control	1986	1,000
• SAS/ETS®	Econometric, time series analysis tool	1980	3,800
• SAS/IML®	Interactive matrix programming facility	1985	2,300
• SAS/STAT®	Full-function statistical package	1986	5,000
• SAS/SHARE®	Multiple-user access tool for concurrent updating of SAS data libraries	1987	570
• SAS/CPE®	Computer performance evaluation tool	1989	100
• SAS/REPLAY-CICS®	Graphics manager for CICS users implementing SAS/GRAPH	1983	25
• SAS/DMI®	Interface between SAS System under OS and IBM's ISPF	1985	250
• SAS/ACCESS®	Interfaces for linking SAS System with various data bases	1989	300
• SAS/RTERM®	Terminal emulation and high-resolution graphics product	1985	265
• SAS/ASSIST®	Interface to basic SAS tools	1988	6,600
JMP™	Statistical visualization product for the MacIntosh	1989	350
SYSTEM 2000®	Data management software	1984	340
SAS/C® Compiler	C compilers	1985	560
NeoVisuals	High-end, 3D graphics, and animation tool	1989	143

Copyright 1990 by INPUT. Reproduction Prohibited.

- The SAS System is available for a range of computers under various operating systems, including MVS, VM, VSE, VMS, PRIMOS, AOS/VS, HP-UX, SunOS, MS-DOS, and PC-DOS.

SYSTEM 2000 runs on IBM 370, 30XX, 43XX, 93XX, and compatible computers under OS, CMS, DOS/VS, DOS/VSE, and in conjunction with CICS; the Unisys Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

The company licenses all software products on an annual basis. License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed. Renewals are available at lower rates. Discounts are available to degree-granting institutions.

Technical support, enhancements, and one set of documentation are included in the annual license fee. Users also receive a quarterly news magazine free of charge.

SAS Institute offers a range of instructor, video, and computer-based training, as well as trainer's kits. Instructor training is available at the Institute Training Center in Cary (NC) and at facilities in Austin (TX), Rockville (MD), Lombard (IL), Irvine (CA), and Toronto. Instruction is also held at customer sites, and hotel and conference centers across the U.S.

Industry Markets

SAS Institute's 1989 revenue was derived from clients in all industries, including many Fortune 1000 companies.

Geographic Markets

Approximately 65% of SAS Institute's 1989 revenue was derived from the U.S. and Canada and 35% from international sources.

U.S. offices are located in Cary (NC), Austin (TX), Irvine (CA), Lombard (IL), and Rockville (MD).

SAS Institute operates subsidiaries in Taiwan, West Germany, the U.K., Canada, Australia, France, Japan, Italy, Sweden, Denmark, Finland, Norway, Belgium, the Netherlands, New Zealand, Singapore, Hong Kong, and Malaysia.

SAS Institute also has distributors located in Saudi Arabia, Israel, Venezuela, Brazil, Spain, Peru, Puerto Rico, Columbia, Uruguay, Finland, Turkey, Yugoslavia, Portugal, Greece, Argentina, Chile, Mexico, and Thailand.

Copyright 1990 by INPUT. Reproduction Prohibited.

Computer Hardware and Software

SAS has the following equipment installed at its headquarters:

- 1 IBM 3081, VM
- 1 IBM 3084, MVS
- 1 IBM 4341 (370 model)
- 1 DEC VAX 8700, VMS
- 1 DEC VAX 11/750, VMS
- 2 DEC MicroVAX IIs, MicroVMS
- 1 Data General ECLIPSE MV/8000
- 1 Prime 9955
- 1 HP 9000/840
- 1 HP 9000/550
- 1 HP 3000
- Apollo workstations
- IBM PC/ATs

Copyright 1990 by INPUT. Reproduction Prohibited.

SAS INSTITUTE, INC.
SAS Circle, Box 8000
Cary, NC 27512-8000
(919) 467-8000

James H. Goodnight, President
Private Corporation
Total Employees: 1,394 (7/88)
Total Revenue, Fiscal Year End
11/30/87: $135,300,000

The Company

SAS Institute, Inc., incorporated in 1976, develops, supports, and maintains systems software products to address data management, analysis, and presentation functions.

SAS was formed to address the statistical analysis needs of agricultural researchers at the University of North Carolina.

Total fiscal 1987 revenue reached $135.3 million, a 32% increase over fiscal 1986 revenue of $102.4 million. SAS has been profitable since its formation in 1976. A three-year revenue summary follows:

SAS INSTITUTE, INC.
THREE-YEAR REVENUE SUMMARY
($ thousands)

	FISCAL YEAR		
ITEM	11/87	11/86	11/85
Revenue	$135,300	$102,400	$75,100
• Percent increase from previous year	32%	36%	NA

SAS management attributes revenue growth in fiscal 1987 to increased sales internationally as well as strong sales in the minicomputer arena.

- Revenue increased 80%, 85%, and 42% in European, Japanese, and the Asia/Pacific markets, respectively.
- During the year the company achieved a 40% increase in sales of DEC VMS-based minicomputer products.

Copyright 1988 by INPUT. Reproduction Prohibited.

The company considers itself primarily a research firm and devotes an unprecedented 55% of its revenue and over 30% of its employees to research and development, while only 10% of its revenue is devoted to marketing.

SAS claims to have products installed at over 65% of active IBM mainframe sites.

In January 1987, SAS acquired Lattice, Inc. of Lombard (IL). The acquisition is the culmination of a relationship that began in 1984 when SAS acquired the right to implement a mainframe version of Lattice's microcomputer C compiler. Under terms of the acquisition, Lattice will operate as an independent subsidiary.

As of July 18, 1988, SAS had 1,394 employees segmented as follows:

U.S.

Marketing and sales	177
Software services and customer support	242
Research and development	306
Computer operations	87
General and administrative	246
	1,058
International	336
	1,394

SAS Institute's principle competitors, by specific application area, include the following:

- Data management: Information Builders' FOCUS.
- Graphics: Computer Associates' DISSPLA and TELL-A-GRAF (acquired from Integrated Software Systems Corporation).
- Statistical analysis: SPSS.
- Data base management systems: Information Builder's FOCUS, On-Line Software International's RAMIS, and Must Software International's NOMAD.
- C compiler products: IBM.

Copyright 1988 by INPUT. Reproduction Prohibited.

Key Products and Services

SAS derived all of its fiscal 1987 revenue from software products and related services. INPUT estimates that packaged software accounted for 89% and consulting and education services accounted for 11% of revenue.

SAS software products are outlined in the exhibit and include the following:

- The SAS[R] System, an integrated data analysis system and fourth generation language with capabilities for a wide range of applications.
- SYSTEM 2000[R] Data Management Software, a full-function data manager for IBM, Unisys, and Control Data mainframes. Several procedures provide an interface between SYSTEM 2000 software and the SAS System.
- C compiler products.

The SAS System includes more than 125 built-in applications grouped into modular components. These applications provide capabilities for data entry, retrieval, and management; report writing and graphics; statistical and mathematical analysis; business planning, forecasting, and decision support; operations research and project management; and applications development. The products within the SAS System include:

- Base SAS, the foundation of the SAS System provides data management, analysis, and report writing facilities.
- SAS/FSP[R] provides facilities for full-screen data entry, editing, querying, letter writing, and spreadsheets.
- SAS/AF[R] is an interactive facility with menus and screens for applications development, computer-based training, and on-line help systems.
- SAS/GRAPH[R] provides facilities for information and presentation color graphics.

Copyright 1988 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed *(a)*
SAS System			
• Base SAS	Foundation of SAS System--Tool for data management, analysis, and report writing	1976	13,038
• SAS/AF	Interactive facility for application development, computer-based training, and on-line help systems	1985	2,617
• SAS/FSP	Full-screen product for editing, query, letter writing, and spreadsheets	1981	5,119
• SAS/SHARE	Multiple-user access tool for concurrent updating of SAS data libraries	1987	367
• SAS/GRAPH	Color graphics package	1980	7,452
• SAS/REPLAY-CICS	Graphics manager for CICS users implementing SAS/GRAPH	1983	-
• SAS/ETS	Forecasting, planning, and financial modeling tool	1980	2,878
• SAS/OR	Project management tool	1983	1,117
• SAS/QC	Tool for statistical quality control	1986	336
• SAS/IML	Interactive matrix programming facility	1985	1,169
• SAS/RTERM	Terminal emulation and high-resolution graphics product	1985	176
• SAS/STAT	Statistical package for microcomputers	1986	1,860
SYSTEM 2000	Data management software	1984 (Acquired)	275
SAS/C Compiler	C compilers for IBM mainframes and PC/370's	1985	385

(a) As of July 1, 1988.

Copyright 1988 by INPUT. Reproduction Prohibited.

- SAS/OR® provides tools for project management, operations research, scheduling, and linear programming.
- SAS/QC® provides facilities for statistical quality control.
- SAS/ETS® provides facilities for econometric and time series analysis.
- SAS/IML® is an interactive matrix language for advanced mathematical, engineering, and statistical applications.
- SAS/STAT™ is a full function statistical analysis package.
- SAS/SHARE® is a multi-user access tool for concurrent updating of SAS data libraries and data sets on mainframe systems.
- SAS/REPLAY-CICS® is a graphics manager for CICS users who want to use SAS/GRAPH software.
- SAS/DMI® is an interface between the SAS System under OS and IBM's Interactive System Productivity Facility (ISPF).
- SAS/ACCESS™ are individual interfaces for linking the SAS System with various data bases, such as IBM's DB2, SQL/DS, and DL/1.
- SAS/RTERM® is a terminal emulator for producing hardcopy graphics with a PC.
- The SAS System had over 36,000 product installations as of April 29, 1988, segmented by processor as follows:

Mainframe	24,193
Minicomputer	6,759
Microcomputer	5,890

- The entire SAS System is being redesigned and recoded in C. The new design is to be written conforming to "multivendor architecture" (MVA). MVA, first concieved in 1984, is a software architecture that maximizes the system's ease of migration from one operating environment to another. SAS's goal is to have its software run identically across vendor and processor size lines. The SAS System is scheduled to be completly rewritten by sometime in 1989.

In its efforts to recode its software in C, SAS has introduced a C instructional package to help others learn C. The package, SAS/C

Copyright 1988 by INPUT. Reproduction Prohibited.

Compiler comes complete with a C compiler and a C language tutorial for the PC at a price of $29.95.

The C compiler products include a native compiler for developing and running C programs on the mainframe, and a cross-compiler for compiling C programs on the mainframe and generating object code that executes on the PC.

SYSTEM 2000 Data Management Software offers integrated tools for enhanced data management. Features include interactive query/update, an integrated data dictionary, indexing capabilities, report writing, relational data base access, high-volume batch and interactive production processing, accounting, data recovery, menu-driven data manipulation, and conversational building of data bases.

- SYSTEM 2000 is available in a multi-user version, and has options available for a CICS interface as well as QueX, a user friendly query and update facility with capabilities for networking and multiple data base access.

- Since SAS acquired SYSTEM 2000 from Intel Corp. in 1985 procedures have been developed to link SYSTEM 2000 with the SAS System.

- SYSTEM 2000 runs on IBM 370, 30XX, 43XX, 93XX, and compatible computers under OS, CMS, DOS/VS, DOS/VSE, and in conjunction with CICS; the Unisys Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

The company licenses all software products on an annual basis. License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed. Renewals are available at lower rates. Discounts are available to degree-granting institutions.

Technical support, enhancements, and one set of documentation are included in the annual license fee. Users also recieve a quarterly news magazine free of charge.

SAS offers a range of instructor, video, and computer-based training, as well as trainer's kits. Instructor training is available at the Institute Training Center in Cary (NC) and at satellite training facilities in Austin (TX), Rockville (MD), Lombard (IL), Irvine (CA), and Toronto. Instruction is also held at customer sites, and hotel and conference centers across the U.S.

Copyright 1988 by INPUT. Reproduction Prohibited.

Industry Markets

SAS Institute's fiscal 1987 revenue was derived from clients in all industries, including many Fortune 1000 companies.

Geographic Markets

SAS Institute operates subsidiaries in: Heidelberg, West Germany; Marlow, Buckinghamshire (U.K.); Paris, France; Copenhagen, Denmark; Sydney, Australia; Wellington, New Zealand; Singapore; Hong Kong; Tokyo, Japan; Kuala Lumpur, Malaysia; Stockholm, Sweden; Oslo, Norway; Milan, Italy.

SAS also has distributors located in the following countries: Saudi Arabia, Israel, Venezuela, Brazil, Spain, Peru, Puerto Rico, Columbia, Uraguay, and Finland.

Computer Hardware and Software

The following equipment is installed at SAS's Cary headquarters:

- 1 IBM 3081, VM.
- 1 IBM 3084, MVS.
- 1 IBM 4341 (370 model).
- 1 DEC VAX 8700, VMS.
- 1 DEC VAX 11/750, VMS.
- 2 DEC MicroVAX II's, MicroVMS.
- 1 Data General ECLIPSE MV/8000.
- 1 Prime 9955.
- 1 HP 9000/840.
- 1 HP 9000/550.
- 1 HP 3000.
- Apollo workstations.
- IBM PC/ATs.

Copyright 1988 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SAS INSTITUTE INC.
Box 8000, SAS Circle
Cary, NC 27511-8000
(919) 467-8000

James H. Goodnight, President
Private Corporation
Total Employees: 823
Total Revenue, Fiscal Year End
11/30/86: $102,400,000

THE COMPANY

- SAS Institute Inc., incorporated in 1976, develops, supports, and maintains software products and related services. SAS Institute currently offers statistical analysis systems, data management systems, and C compiler products. More than 27,000 products have been installed in 63 countries worldwide.

- Fiscal 1986 revenue reached $102.4 million, a 36% increase over fiscal 1985 revenue of $75.1 million. SAS Institute's management projects that fiscal 1987 revenue will reach $123 million, a 20% increase over fiscal 1986 revenue. The company has been profitable since its formation in 1976.

- In January 1987, SAS Institute acquired Lattice, Incorporated of Chicago. The acquisition is the culmination of a relationship that began in 1984 when the Institute acquired the right to implement Lattice's microcomputer C compiler for the IBM mainframe environment. Under the terms of the acquisition, Lattice will operate as an independent subsidiary.

- SAS Institute's subsidiaries include:

 - SAS Institute GmbH, located in Heidelberg, West Germany.
 - SAS Software Limited, located in Marlow, Buckinghamshire (U.K.).
 - SAS Institute S.A., located in Paris, France.
 - SAS Software ApS, located in Copenhagen, Denmark.
 - SAS Software Pty. Ltd., located in Sydney, Australia.
 - SAS Institute (NZ) Ltd., located in Wellington, New Zealand.
 - SAS Institute Pte. Ltd., located in Singapore.
 - SAS Institute Ltd., located in Hong Kong.
 - SAS Software K.K., located in Tokyo, Japan.
 - SAS Institute Sdn Bhd, located in Kuala Lumpur, Malaysia.
 - SAS Institute AB, located in Stockholm, Sweden.
 - SAS Institute A/S, located in Oslo, Norway.
 - SAS Institute S.R.L., located in Milan, Italy.

- As of December 1986, SAS Institute had 823 full-time employees, segmented as follows:

©1987 by INPUT. Reproduction Prohibited.

Research and development	278
Marketing/sales	90
Software services/customer support	108
Computer operations	66
General and administrative	281
	823

- SAS Institute's competitors, by specific application area, include the following:
 - Data management: Information Builders' FOCUS.
 - Graphics: Computer Associates' DISSPLA and TELL-A-GRAF (acquired from Integrated Software Systems Corporation).
 - Statistical analysis: SPSS.
 - Data base management systems: Information Builders' FOCUS, On-Line Software International's RAMIS, and Dun & Bradstreet's NOMAD.
 - C compiler products: IBM and Waterloo Microsystems Inc.

KEY PRODUCTS AND SERVICES

- SAS Institute derived all of its fiscal 1986 revenue from software products and related services. Packaged software accounted for 89% and publication and education services accounted for 11% of revenue.
- SAS Institute software products are outlined in the exhibit and include the following:
 - The SAS® System, an integrated data analysis system and fourth generation language with capabilities for a wide range of applications.
 - SYSTEM 2000® Data Management Software, a full-function data manager for IBM, Sperry, and Control Data mainframes. Several procedures provide an interface between SYSTEM 2000 software and the SAS System.
 - C compiler products.
- The SAS System is an integrated data analysis system and fourth generation language. Currently, the SAS System is a family of 16 products, each product integrated with the others.
 - Software products available for license in the SAS System include:
 - Base SAS software, the foundation of the SAS System, provides tools for data retrieval and management, statistical analysis,

©1987 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

Product	Description	Year Introduced	Number Installed*
Base SAS Software	Foundation of SAS System--Tool for data management, analysis, and report writing	1976	10,000
SAS/AF Software	Interactive facility for application development, computer-based training, and on-line help systems	1985	1,300
SAS/FSP Software	Full-screen product for editing, query, letter writing, and spreadsheets	1981	3,500
SAS/SHARE Software	Multiple-user access tool for concurrent updating of SAS data libraries	New	-
SAS/GRAPH Software	Color graphics package	1980	5,400
SAS/REPLAY-CICS Software	Graphics manager for CICS users implementing SAS/GRAPH	1983	20
SAS/ETS Software	Forecasting, planning, and financial modeling tool	1980	2,600
SAS/OR Software	Project management tool	1983	1,000
SAS/QC Software	Tool for statistical quality control	1986	76
SAS/IML Software	Interactive matrix programming facility	1985	560
SAS/DMI Software	SAS System/IBM ISPF interface	1985	80
SAS/IMS-DL/1 Software	SAS interface to IBM DB and DB/DC systems using DL/1	1981	525
SAS/DB2 Software	SAS System interface to IBM's DB2 under OS	New	-
SAS/SQL-DS Software	SAS System interface to IBM's SQL/DS under CMS	New	-
SAS/RTERM Software	Terminal emulation and high-resolution graphics product	1985	110
SAS/STAT Software	Statistical package for microcomputers	1986	757
System 2000 Software	Data management software	1984 (Acquired)	200
C Compiler Products	C compilers for IBM mainframes	1985	260

*As of December 1986

©1987 by INPUT. Reproduction Prohibited.

and report writing. The software includes a programming language and built-in procedures. Uses include decision support, scientific and marketing research, computer performance evaluation, and capacity planning.

- SAS/AF® software offers tools for developing menu-driven front-ends to applications, computer-based training, and on-line help systems.

- SAS/FSP® software is an interactive, full-screen facility for data entry, editing, and retrieval.

- SAS/SHARE™ software is a new software product that gives multiple users access to the same SAS data library.

- SAS/GRAPH® software is a tool for high-resolution color graphics.

- SAS/REPLAY-CICS® software is a graphics manager for CICS users. It extends the color graphics capabilities of SAS/GRAPH software.

- SAS/ETS® software provides forecasting, planning, and financial reporting tools and extends the modeling and simulation capabilities of base SAS software. SAS/ETS software is used for applications including econometric modeling, cash-flow planning, and sales forecasting or as a decision support tool for financial and marketing analysis.

- SAS/OR® software is a project management and decision support tool. The software can be used to schedule projects based on structural, time, and resource constraints.

- SAS/QC® software, first available in 1986, offers specialized tools for statistical quality control applications. The software includes procedures for generating Shewhart, cumulative sum, and moving average control charts. These charts aid in detecting variations in manufactured items due to special causes. Also provided are capability indices, summary statistics, and graphical tools for determining how well manufactured output meets specified quality control.

- SAS/IML™ software is an interactive matrix programming language for sophisticated data analysis and manipulation. Data management, mathematical, and matrix operations are built directly into the software.

- SAS/DMI® software is an interactive applications development tool linking the SAS System with IBM's Interactive System Productivity Facility (ISPF).

©1987 by INPUT. Reproduction Prohibited.

 - SAS/IMS-DL/I® software is an interface between the SAS System and IBM DL/I products. This interface provides a high-level programming language to use with DL/I data bases, plus security features.

 - Two new products are under development to provide interfaces with IBM's relational data base management systems, DB2 and SQL/DS. SAS/DB2™ software for the OS operating environment and SAS/SQL-DS™ software for the CMS operating environment are scheduled for second quarter 1987 release. The software runs in batch or interactively.

- The SAS System runs on mainframes, minicomputers, and personal computers and is compatible across operating environments. The software supports IBM 370/30XX/43XX and compatible computers; DEC VAX series minicomputers and workstations under VMS; Prime 50 series under PRIMOS; Data General ECLIPSE MV series under AOS/VS; IBM XT/370 and AT/370 under VM/PC; and IBM's PC XT, PC AT, and compatibles under PC-DOS. Not all products run on all machines or operating systems. Batch and interactive versions are available for all products except SAS/FSP and SAS/AF software, which are interactive.

- SAS/RTERM® software is a standalone product for terminal emulation and high resolution graphics. The software emulates DEC's VT100 terminal and the graphics commands of the Tektronix 4105 series. SAS/RTERM software supports the IBM PC, 3270 PC, PC/XT, PC/AT, and compatible machines.

- The SAS System for personal computers is compatible with the SAS System for mainframes and minicomputers. Currently, the SAS System for PCs includes three products: base SAS software for data management, descriptive statistical analysis, and report writing; SAS/STAT™ software for full-function statistical analysis; and SAS/IML software for interactive matrix programming. Additional products are under development.

- SYSTEM 2000 Data Management Software offers integrated tools for enhanced data management. Features include interactive query/update, an integrated data dictionary, indexing capabilities, report writing, relational data base access, high-volume batch and interactive production processing, accounting, data recovery, menu-driven data manipulation, and conversational building of data bases.

 - Since SAS Institute acquired SYSTEM 2000 software in early 1985, several procedures have been developed to link SYSTEM 2000 software with the SAS System.

 - SYSTEM 2000 software supports IBM 370/30XX/43XX and compatible computers under OS, CMS, DOS/VS(E), and CICS; the Sperry Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

©1987 by INPUT. Reproduction Prohibited.

- The C compiler products include a native compiler for developing and running C programs on the mainframe, and a cross-compiler for compiling C programs on the mainframe and generating object code that executes on the PC. The C compilers support IBM 370/30XX/43XX and compatible computers under OS and CMS.

- SAS Institute is currently licensing approximately 512 new products per month in the U.S. and Canada.

 - The company licenses all software products on an annual basis. License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed.

 - Renewals are available at lower rates. Discounts are available to degree-granting institutions.

 - Technical support, enhancements, and one set of documentation are included in the annual license fee. Users also receive a quarterly news magazine free of charge.

 - SAS Institute offers a full range of instructor-based training at a company's site, at major hotels around the country, and at SAS Institute training centers in Cary (NC), Rockville (MD), Austin (TX), and Ontario (Canada). Video-based and computer-based courses are also offered. A training center is scheduled to open in the Chicago (IL) area during the third quarter of 1987.

- SAS software products are available on most major remote computing networks including Boeing Computer Services, GEISCO, and McDonnell Douglas.

INDUSTRY MARKETS

- SAS Institute's fiscal 1986 revenue was derived from clients in all industry sectors, including many Fortune 1000 companies.

GEOGRAPHIC MARKETS

- Seventy-five percent of fiscal 1986 revenue was derived from across the U.S. Twenty-five percent was from international sources, primarily Europe.

- In addition to the subsidiaries previously listed, distributors are located in Saudi Arabia, Israel, Venezuela, Brazil, Spain, and Finland.

COMPUTER HARDWARE AND SOFTWARE

- The following equipment is installed at SAS Institute's Cary headquarters:

 - 1 IBM 3081, MVS.
 - 1 IBM 4381, VM.

©1987 by INPUT. Reproduction Prohibited.

- 1 IBM 4341 (370 model).
- 1 DEC VAX 8600, VMS.
- 1 DEC VAX 11/750, VMS.
- 2 DEC MicroVAX IIs, MicroVMS.
- 1 Data General ECLIPSE MV/8000.
- 1 Prime 9955.
- 1 HP 9000/550.
- 1 HP 300.
- Apollo workstations.
- IBM PC/ATs.

©1987 by INPUT. Reproduction Prohibited.

SAS INSTITUTE INC.
Box 8000, SAS Circle
Cary, NC 27511
(919) 467-8000

James H. Goodnight, President
Private Corporation
Total Employees: 212
Total Revenue, Fiscal Year End
11/30/82: $16,000,000*

THE COMPANY

- SAS Institute Inc. was incorporated in 1976 to further develop, support, and promote SAS (Statistical Analysis System), a package which originated at North Carolina State University. The Institute now markets an integrated line of software products based on SAS. Approximately 7,500 products are installed at 3,500 locations worldwide.

- Fiscal 1982 revenue is estimated at $16 million, a 60% increase over 1981 revenue of approximately $10 million.

 - A 64% growth in revenue to approximately $26 million is projected for fiscal 1983.

 - The company has been profitable since its formation in 1976.

- SAS Institute's subsidiaries include:

 - SAS Software Limited, located in Weybridge, Surrey (U.K.).

 - SAS Institute GmbH, in Heidelberg, West Germany.

 - SAS Institute (NZ) Ltd., in Wellington, New Zealand.

 - SAS Software Pty. Ltd., in Sydney, Australia.

 - A subsidiary in France, which is currently in formation.

- SAS Institute had 212 employees in November 1982. There are currently 227 employees, segmented as follows:

Marketing/sales	48
Software services/ customer support	67
Computer operations	67
General and administrative	45
	227

*Company estimate

©1983 by INPUT. Reproduction Prohibited.

- SAS Institute software packages compete with Integrated Software Systems Corporation's (ISSCO) DISSPLA and TELL-A-GRAF graphics products, Information Builder's FOCUS and Pansophic Systems' EASYTRIEVE data base management systems, and SPSS Inc.'s SPSS statistical package.

KEY PRODUCTS AND SERVICES

- SAS Institute derived 100% of its fiscal 1982 revenue from software products and related services. Packaged software accounted for 82% and consulting and education services 18% of revenue.

- The SAS System is an integrated series of software packages based on SAS (Statistical Analysis System). The products run on IBM 370, 30XX, 43XX, and compatible mainframes under OS, VM/CMS, DOS/VSE, and SSX. Not all products run on all machines or operating systems.

 - Batch and interactive versions are available for all products except SAS/FSP, which is interactive.

 - Test versions running on the DEC VAX-11/7XX Series under VMS, Data General ECLIPSE MV Series under AOS/VS, and Prime 50 Series under PRIMOS will soon be available.

 - SAS products are available on most major remote computing networks, including Boeing Computer Services, GEISCO, Informatics, Martin Marietta Data Systems, and MCAUTO.

 - The Institute is currently licensing approximately 250 products per month.

- Software products available for license in the SAS System are outlined in the exhibit and include:

 - The SAS programming language, which provides programmers and novice users with a comprehensive, easy-to-use system composed of over 75 procedures for data management and retrieval, statistical analysis, and reporting. Uses include decision support, market research, computer performance evaluation, and capacity planning. SAS is required as the base system for all other SAS products. Features include:

 - Data management and retrieval tools to add, delete, and change data. Procedures include subsetting, concantenating, sorting, merging, interleaving, and updating.

 - A statistical analysis library of almost 50 procedures, ranging from simple descriptive statistics to complex multivariate techniques. Included are linear and multiple regression analysis, clustering, analysis of variance and covariance, linear models, common factor and component analyses and rotations, and computation of linear or quadratic discriminant functions.

©1983 by INPUT. Reproduction Prohibited.

EXHIBIT

SAS INSTITUTE SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	LICENSE FEE		YEAR INTRO-DUCED	NUMBER INSTALLED*			
		FIRST YEAR	RENEWAL YEAR		OS	VM/CMS	DOS/VSE	TOTAL
SAS (Statistical Analysis System)	Programming language, statistical analysis, data management, and report writing.	$7,500	$2,800	1976	2,409	714	131	3,254
SAS/GRAPH	Color graphics package.	$5,000	$2,000	1980	1,161	434	N/A	1,595
SAS/ETS (Econometrics and Time Series Library)	Forecasting, planning, and financial modeling tool.	$3,000	$1,500	1980	853	282	32	1,167
SAS/FSP (Full-Screen Product)	Full-screen formatting product for interactive use with IBM 3270 or compatible terminals.	$3,600	$1,800	1982	523	224	N/A	747
SAS/IMS-DL/1	SAS interface to IBM DB and DB/DC systems using DL/1.	$4,000	$3,000	1982	157	1	N/A	158
SAS/OR (Operations Research)	Project management tool.	$3,000	$1,500	1983	NEW			
SAS/REPLAY-CICS	Data base manager allowing IBM CICS users to manipulate SAS/GRAPH displays.	NEW		1983	NEW			
				Total	5,103	1,655	163	6,921

* As of February 1983

©1983 by INPUT. Reproduction Prohibited.

- Report writing with features for customization and flexible formatting.

- Line printer graphics capabilities for producing horizontal and vertical bar charts; block, pie, and star charts; point and contour plots with overlay and overprint options; hierarchically organized tables of descriptive statistics; and calendar format tables.

- SAS/GRAPH, a color graphics package that can be used to produce charts, plots, and maps. The package is used in business and research for presentation and information graphics applications.

 - Capabilities include:

 - Basic, contour, and three-dimensional plots.

 - Bar, pie, star, and block charts.

 - Projection of statistical data to choropleth, surface, prism, and block maps.

 - Production of slides and posters.

 - Replaying stored results for management presentations.

 - SAS/GRAPH supports ADI, Calcomp, Chromatics, Colorgraphics, Dicomedia, Hewlett-Packard, Houston Instruments, IBM, IDT, ISC, Ramtek, Servogor, Tektronix, Versatec, Xerox, and Zeta equipment with device-intelligent software.

- SAS/ETS (Econometrics and Time Series Library), which provides forecasting, planning, and financial reporting tools, extending the modeling and simulation capabilities in SAS. The system is used for applications including econometric modeling, cash-flow planning, and sales forecasting or as a decision support tool for financial and marketing analysis.

 - More than 15 procedures for time series forecasting, regression techniques, and simultaneous equation model estimation and simulation are provided.

 - SAS/ETS can model linear and nonlinear systems and produce row-and-column financial reports and loan amortization tables.

 - The system also contains an adaptation of the Bureau of the Census X-11 Seasonal Adjustment program for monthly, quarterly, or seasonal adjustment.

- SAS/FSP (Full-Screen Product), introduced in February 1982, a menu-driven, full-screen product for interactive use with IBM 3270 or com-

©1983 by INPUT. Reproduction Prohibited.

patible terminals. The system handles data entry and retrieval tasks as well as letter, mail list management, sales tracking, prospect file, and report writing needs.

 - SAS/FSP can add, edit, query, or delete data from an SAS data set. It can also define initial, maximum, and minimum values; required, capitalized, and protected fields; and colors.

 - Terminal screens can be defined to replicate order entry forms, purchase invoices, and consumer questionnaires.

 - The system can catalog, store, edit, and send letters.

 - A spreadsheet financial modeling feature introduced in 1983 conducts "what-if" analyses for budget planning and financial analysis.

- SAS/IMS-DL/I, an interface between the SAS system and IBM DB and DB/DC systems that use DL/I as the data descriptive and data manipulation language. SAS/IMS-DL/I runs on IBM mainframes under OS batch, TSO, or DOS/VSE.

 - The package is easily installed with little or no modification, provides quick access to DL/I data bases, and integrates with SAS for use of data management, analysis, and reporting tools with the DL/I data base.

 - SAS/IMS-DL/I supports both sequential and random access with full updating capabilities and can be used by data base administrators and programmers for such tasks as:

 - Statistical analysis, reporting, and formatting of information extracted from data bases.

 - Loading data bases from disk, tape, or SAS data sets.

 - Reorganization of DL/I data bases.

 - Simulating or debugging system call logic.

- SAS/OR (Operations Research), announced in January 1983 and scheduled for release in July, a project management tool for business planning and scheduling. The system uses linear programming and critical path method procedures to schedule manpower, capital, equipment, and raw materials to ensure productivity.

 - Especially useful in large-scale construction and research and development projects, SAS/OR handles general assignment problems, determines minimum and maximum cost flow through a network, and determines the quantity of goods to be shipped from supply to demand points.

©1983 by INPUT. Reproduction Prohibited.

- In February 1983, the Institute announced SAS/REPLAY-CICS, a simple data base manager designed to enable IBM CICS users to store, manage, manipulate, retrieve, and replay SAS/GRAPH displays. The package is scheduled for availability to IBM OS users during the second quarter of 1983 and to DOS/VSE installations during the third quarter.

- Portable SAS, a version of SAS designed to run in non-IBM environments, is currently under development at the Institute. The company has signed a joint marketing agreement with Digital Equipment Corporation under which the Institute will provide all software support.

 - The Portable SAS system will operate on the DEC VAX-11/7XX Series under VMS, Data General ECLIPSE MV Series under AOS/VS, and Prime Computer 50 Series under PRIMOS.

 - The first release will include SAS, SAS/GRAPH, and SAS/FSP, with SAS/ETS and SAS/OR to follow. Each product is priced separately.

 - Fees for a first-year license of SAS will range from $5,000 to $7,500 depending on equipment used. Yearly renewals are priced at $2,800.

 - Pricing for other products will be approximately the same as that shown in the exhibit.

- The company provides a full range of public, in-house, and videotape training courses either at the Institute or at various locations throughout the U.S. and Canada.

INDUSTRY MARKETS

- SAS Institute's fiscal 1982 revenue was derived from clients in all industry sectors, including many Fortune 100 companies.

GEOGRAPHIC MARKETS

- Eighty-nine percent of fiscal 1982 revenue was derived from across the U.S. Eleven percent was from international sources, primarily Canada and Europe.

- SAS subsidiaries are located in England, West Germany, New Zealand, and Australia. A new subsidiary will be located in France.

- Licensed agents are located in Italy, Israel, Japan, Singapore, and South Africa.

©1983 by INPUT. Reproduction Prohibited.

COMPUTER HARDWARE AND SOFTWARE

- The following equipment is installed at the Institute's Cary headquarters:
 - 1 IBM 4300, VM/CMS, DOS/VSE.
 - 1 IBM 370/158, OS.
 - 1 IBM 3083 (scheduled for installation in May 1983).
 - 1 DEC VAX-11/780, VMS.
 - 1 Data General ECLIPSE MV/8000, AOS/VS.
 - 1 Prime 50, PRIMOS.

©1983 by INPUT. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1996

SAS Institute Inc.

President: James H. Goodnight
SAS Campus Drive
Cary, NC 27513-2414
Phone: (919) 677-8000
Fax: (919) 677-4444
Internet: http://www.sas.com

Status:	Private
Employees:	3,683 (12/95)
Revenue:	$562,400,000
Fiscal Year End:	12/31/95

Key Points

- SAS Institute Inc. is one of the world's largest independent software companies. The Institute is devoted to the development, support, and maintenance of its software and related services.
- In December 1995, SAS Institute introduced the Orlando Release, the company's latest release of the SAS® System. The Orlando Release extends the SAS System's data warehousing capabilities and paves the way for strategic implementation of warehouses with data warehousing automation tools that will be added in 1996.
- In the late fall of 1995, SAS Institute created its Business Division to continue development efforts on the company's horizontal and vertical market offerings.
- In April 1995, the company opened the new Data Warehouse R&D department to address expanding infrastructure requirements for building and managing corporate-level data warehouses as well as department-level "data marts."

© INPUT 1996. Reproduction prohibited.

All brand names and product names are acknowledged to be trademarks or registered trademarks of their owners.

Company Description

SAS Institute Inc., incorporated in 1976, develops, supports, and maintains systems and applications software products. The company's flagship product, the SAS® System, is an integrated suite of information delivery software for business decision making.

Organization and Structure

SAS Institute's key executives are listed below:

Name	Title
Dr. James Goodnight	President and Co-Founder
John Sall	Sr. V P and Co-Founder
Lee Richardson	Director of Asia/Pacific
Art Cooke	President of European Headquarters

In addition to its headquarters in Cary (NC), SAS Institute has 32 offices in North America, 30 in Europe, and 12 in the Asia/Pacific region.

The company has U.S. regional offices in Atlanta, (GA), Austin (TX), Bedminster (NJ), Boston (MA), Chicago (IL), Cincinnati (OH), Dallas (TX), Denver (CO), Detroit (MI), Hartford (CT), Houston (TX), Indianapolis (IN), Kansas City (KS), Los Angeles (CA), Minneapolis (MN), Nashville (TN), New Orleans (LA), New York (NY), Orlando (FL), Philadelphia (PA), Phoenix (AZ), Pittsburgh (PA), Rockville (MD), San Francisco (CA), Seattle (WA), and St. Louis (MO).

SAS Institute also operates subsidiaries in Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Hungary, Indonesia, Italy, Japan, Korea, Malaysia, Mexico, the Middle East, the Netherlands, New Zealand, Norway, the People's Republic of China, the Philippines, Poland, Portugal, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, and the U.K.

The company has distributors in 25 countries outside the U.S.

Company Strategy

SAS Institute's strategy is based on a customer-driven focus. One way in which the company practices this is through an annual survey, the SASware Ballot®, from which the responses form a foundation for future development and product enhancements.

One of the major goals of the SAS Institute has been to strengthen its position in the data warehouse arena.

- The company has used the Orlando Release to pave the way for the strategic implementation of warehouses with technology planned for release in 1996, including a tailored environment designed for warehouse managers and powerful extensions to the company's OLAP environment, such as multidimensional database capabilities.
- In addition, the company is working on data warehouse and EIS components, ground-breaking graphical information systems, a foundation of applied analysis programs, and rapid applications development tools.

SAS Institute is also committed to multiplatform computing and a client/server strategy. A key priority for SAS Institute is to continuously strengthen its client/server architecture, since more than two-thirds of all SAS software sites are running the SAS System in multiple environments.

- New releases of the SAS System provide both data and compute services to include front-end and back-end tools for accessing data from a variety of sources, both

© INPUT 1996 Reproduction prohibited.

relational and nonrelational, across multiple architectures.

- The new Orlando Release offers a wider variety of tools such as business objects, and brings the SAS System to every implementation of Windows, including Windows 95.

- In addition, the SAS System exploits the computer resources of the server hardware to make better use of all available resources and deliver the information in a form most appropriate to the needs of the computer user through graphic user interfaces and executive information system interfaces.

SAS Institute is repositioning itself as a total solutions provider. The company has been very successful as a software tools supplier, and is now beginning to provide ready-to-use applications for specific vertical markets such as the pharmaceutical industry, and horizontal markets such as IT service management.

- In 1995, the company created a new business unit, the Business Solutions R&D department, focused on developing a line of targeted business solutions.

- In 1996, the company will deliver its first packaged products—one for human resources reporting, and another for financial consolidation and reporting.

Financials

Total 1995 revenue reached $562.4 million, a 17% increase over 1994 revenue of $482 million, marking SAS Institute's 19th consecutive year of double-digit growth. SAS Institute has been profitable since its formation in 1976. A five-year revenue summary follows:

SAS Institute Inc.
Five-Year Revenue Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	1995	1994	1993	1992	1991
Revenue	$562.4	$482.0	$420.3	$365.5	$295.1
• Percent change from previous year	17%	15%	15%	24%	23%

SAS Institute management attributes much of its revenue growth in 1995 to the expansion of the data warehouse market.

Research and development expenses were approximately $174 million (31% of revenue) in 1995, $149 million (31% of revenue) in 1994, and $143 million (34% of revenue) in 1993.

The major factors contributing to the 17% increase in R&D spending were the creation of two new R&D groups—the Business Solutions R&D department, formed in late fall 1995, and the Data Warehouse R&D department, formed in April 1995.

Revenue Analysis by Product / Service

Total revenue from PC software rose 36% during 1995, UNIX software revenue grew 37%, and mainframe revenue increased 13%.

© INPUT 1996. Reproduction prohibited.

- Client/server software grew 23% during 1995.
- In 1995, 61% of the company's new software revenue (from first-year license fees, not renewal fees) was derived from PC and UNIX software.

Market Financials

SAS Institute's 1995 revenue was derived from clients in all industries, including many Fortune 1000 companies. Approximately 79% of 1995 revenue was derived from businesses, 17% from government, and 4% from educational markets.

In 1995, SAS Institute had marked growth in revenue for the insurance, banking/finance, pharmaceuticals, retail sales, and health care industries. Approximately 17% of total 1995 revenue was derived from the health/insurance industry, and 9% from the banking/finance industry.

Geographic Markets

Approximately 48% of SAS Institute's 1995 revenue was derived from the U.S., 3% from Canada, 38% from Europe, and 11% from Asia/Pacific and International Operations. A three-year summary of geographic source of revenue follows:

SAS Institute Inc.
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	269.9	48%	$245.8	51%	$222.8	53%
Canada	16.9	3%	14.5	3%	14.0	3%
Europe	213.7	38%	168.7	35%	140.6	10%
Asia/Pacific and International	61.9	11%	53.0	11%	40.3	33%
Other	---	---	---	---	2.5	1%
Total	$562.4	100%	$482.0	100%	$420.3	100%

Employees

As of December 31, 1995, SAS Institute had 3,683 full-time employees worldwide—2,404 employees in North America, 1,023 in Europe, and 256 in the Asia/Pacific region.

Key Products and Services

With more than 3.5 million users in 119 countries, SAS software products were installed at 29,400 sites as of December 31, 1995, up from 28,300 sites in 1994, and 26,661 sites in 1993.

A three-year summary of the number of sites and installed products, by processor, follows:

© INPUT 1996 Reproduction prohibited.

SAS Institute Inc.
Three-Year Site and
Product Installation Summary

	Fiscal Year					
	1995		1994		1993	
Hardware Platform	Sites	Product Installations	Sites	Product Installations	Sites	Product Installations
Mainframes	6,300	28,300	6,600	30,000	7,058	31,737
Minicomputers	2,500	13,700	2,800	14,000	3,069	15,070
UNIX	5,200	30,000	4,500	203,000	3,751	200,000
Personal computers	15,400	950,000	14,400	875,000	12,783	655,000

Software Products

SAS Institute's current software products are outlined in the exhibit on the following page.

The SAS System is an integrated suite of software products for enterprise-wide information delivery that provides organizations with tools to access, manage, analyze, and present their data within an application development environment.

- The SAS System has been designed to support effective information delivery by:
 - Providing universal data access
 - Increasing the capabilities and breadth of applications in the software
 - Providing user interfaces to match user needs and experience
 - Supporting and exploiting the advantages of computer hardware platforms
- The SAS System is grouped into modular components that give organizations the opportunity to obtain only the functions they need. As organizations' needs grow, they can add additional SAS System components.
- Capabilities within the SAS System include EIS, data warehousing, graphics, data analysis, report writing, quality improvement, project management, computer performance evaluation, client/server computing, database access, decision support, applications development, and more.
- The SAS System's MultiVendor Architecture™ (MVA™) maximizes the system's ease of migration from one operating environment to another. With MVA, the SAS System is a vendor-independent system that runs similarly across all environments the SAS System supports.

© INPUT 1996. Reproduction prohibited.

Exhibit
SAS Institute Software Products

Product	Description	Year Introduced
SAS System		
- Base SAS	Foundation of SAS System, for data access, management, analysis, and presentation	1976
- SAS/FSP®	Full-screen product for data entry, retrieval, and letter writing	1981
- SAS/AF®	Interactive facility for application development, computer-based training, and on-line help systems	1985
- SAS/GRAPH®	High-resolution color graphics	1980
- SAS/OR®	Project management and operations research	1983
- SAS/QC®	Tool for statistical quality improvement	1986
- SAS/ETS®	Econometric, time series analysis tool	1980
- SAS/IML®	Interactive matrix programming facility	1985
- SAS/STAT®	Full-function statistical analysis	1986
- SAS/SHARE®	Multiple-user access tool for concurrent updating of SAS data libraries; computer performance evaluation tool	1987 1989
- SAS/ACCESS®	Interfaces for linking SAS System with various databases	1989
- SAS/RTERM®	Terminal emulation and high-resolution graphics	1985
- SAS/ASSIST®	Menu-driven interface to SAS System tools	1988
- SAS/CONNECT®	Cooperative and distributive processing	1990
- SAS/SPECTRAVIEW®	Multidimensional visualization tool	1995
- SAS/INSIGHT™	Interactive statistical graphics	1990
- SAS/ENGLISH™	Natural language interface	1992
- SAS/LAB™	Statistical and graphical data analysis for scientists and engineers	1992
- SAS/CALC™	Electronic spreadsheet	1992
- SAS/EIS™	Executive information system development tool	1992
- SAS/TOOLKIT™	Tools for user-written procedures	1992
- SAS/PH-Clinical™	Clinical data review	1992
SAS/C®Compiler	Mainframe C compiler	1985
SAS/C Cross-Platform Compiler	C compiler for UNIX	1994
SAS/C C++ Development System	Development tool for mainframes	1993
SAS/C Compiler for AmigaDOS	Microcomputer C compiler	1990
JMP®	Macintosh (and Windows) statistical visualization package	1989
SYSTEM 2000®	Database management system	1984
Emulus®	IBM 3270 emulation package for UNIX	1994
InfoTap™	Full-text search and retrieval system	1994

© INPUT 1996 Reproduction prohibited.

- The SAS System supports mainframes (MVS, CMS, VSE), minicomputers (OpenVMS for VAX and AXP), UNIX workstations (SunOS, HP-UX, AIX, DG/UX, ULTRIX, RISC/os, Digital UNIX, MIPS ABI, Intel ABI), personal computers (DOS, Macintosh, OS/2, Windows, Windows NT), and supercomputers (ConvexOS).

SYSTEM 2000 runs on IBM 370, 390, 30XX, 43XX, 93XX, and compatible computers under OS, CMS, DOS/VS, DOS/VSE, and in conjunction with CICS; the Unisys Series 1100 under OS 1100; and the Control Data 6000 and CYBER series under NOS and NOS/BE.

Recent product announcements include the following:

- The SAS/SPECTRAVIEW® software, a point-and-click multidimensional visualization tool, permits four-dimensional exploitation of the SAS System for Data Warehousing.

- The SAS Business Solution for Financial Consolidation & Reporting is the first in a series of SAS Business Solutions to deliver integrated data warehouse and OLAP techniques in a targeted application for a specific group of business professionals.

- The Orlando Release, named after the city in which it was first previewed in 1995, is the newest release of the SAS System. It provides enhancements in data warehousing, applications development, business intelligence, and analytic and technical applications. In particular, the Orlando Release extends the SAS System's data warehousing capabilities and is laying the foundation for strategic implementation of warehouses with data warehousing automation tools that will be added in 1996.

The company licenses all software products on an annual basis (with the exception of the JMP family of products).

- License fees for mainframe and minicomputer products are based on machine classification. Fees for the PC products are based on the number of workstations where the product is installed. Renewals are available at lower rates.

- Technical support, enhancements, and one set of documentation are included in the annual license fee.

- Discounts are available to degree-granting institutions.

Customer Services

SAS Institute offers free software updates and enhancements; phone-in technical support; 24-hour on-line support; consulting services; instructor-, video- and computer-based training courses; documentation; quarterly technical journals; a network of local, regional, national, and international users groups; and a free quarterly newsmagazine.

Instructor training is available at the Institute Training Center in Cary (NC) and at SAS Institute regional offices. Instruction is also held at customer sites and hotel and conference centers across the U.S.

The Institute also distributes an annual survey—the SASware Ballot®. The responses to the ballot provide a foundation for future development and product enhancements.

Clients

Approximately 66% of SAS Institute's clients are businesses (including 97% of the Fortune 100), 18% are universities, and 16% are government agencies. Two-thirds of all organizations with the SAS system are using the software in multiple environments.

© INPUT 1996. Reproduction prohibited.

SAS Institute's commercial clients represent a range of industries, including aerospace and military commodities, airlines, agriculture and forest products, appliances and household durables, autos and automotive products, banking, beverages and food products, tobacco, broadcasting and publishing, business and public services, chemicals, construction and housing, data processing and reproduction, electric and gas utilities, electrical and electronics, energy equipment and services, energy sources, financial services, health and personal care, industrial components, insurance, leisure and tourism, machinery and engineering, merchandising, metals and steel, pharmaceuticals, recreation and other consumer goods, road and rail transportation, telecommunications, wholesale, and international trade.

Some of SAS Institute's announced customers include Alcoa, American Airlines, Amoco, AT&T, Avon Products, Coca-Cola, Data General, Daimler-Benz, Digital Equipment, Duke University, Du Pont, Exxon, Harvard University, Hewlett-Packard, IBM, MCI Communications, Monsanto, Pfizer, Rohm and Haas, Rolls Royce, Shell Oil, Sun Microsystems, 3M, Upjohn, and the U.S. Bureau of the Census.

Marketing and Sales

SAS Institute markets its products in the U.S. through a direct sales force.

Outside the U.S., the company markets its products through subsidiaries and distributors.

SAS Institute also has distributors in Argentina, Brazil, Chile, Columbia, Egypt, Greece, India, Ireland, Israel, Latvia, Lithuania, Pakistan, Panama, Puerto Rico, Russia, Saudi Arabia, Turkey, Uruguay, and Venezuela.

Alliances

SAS Institute maintains strategic development and marketing partnerships with all major hardware vendors, various software vendors, systems integrators, and leading consultancies.

SAS Institute's Quality Partners Program is a program designed to assist and support third-party organizations whose primary business is providing consulting services using SAS software. The Program currently has more than 100 partner organizations worldwide.

In 1995, SAS Institute founded the joint Customer Technology Center with key IT partners, including IBM, Digital Equipment Corporation, Sun Microsystems, and Hewlett-Packard. This center will help customers speed up the process of integrating UNIX workstations, PCs, and mainframe systems for mission-critical data and software applications.

During 1995, SAS Institute also launched the Rapid Data Warehouse Partners Program to help user organizations quickly implement complete, end-to-end data warehouse solutions. Charter members of the program include IBM, Hewlett-Packard, Digital Equipment, Sun Microsystems, and Computer Sciences Corporation.

Cooperative relationships with hardware and software vendors include the following:

- IBM Corporation—SAS Institute has had a formal business relationship with IBM since 1988 and was one of the first independent software companies to fully endorse IBM's SAA.
 - SAS Institute has a joint development agreement with IBM for the ESA/390 architecture and is an IBM Business Partner through the Cooperative Software

© INPUT 1996. Reproduction prohibited.

Program on the RS/6000 in the RISC/AIX arena, and for VSE/ESA and VSE/SP environments in the U.S. and Canada.

- The Institute is also working with IBM in the UNIX market to provide a complete hardware/software solution for distributed application processing.

- In 1995, SAS became a participant in IBM's Market Development program for the AIX operating system, full support for OS/2, and a strategic relationship for data warehousing and parallel processing on SAS's SP/2 machines.

- Microsoft Corporation—SAS Institute is a Microsoft Solution Development Partner, working on joint development and marketing-related issues.

 - In 1995, the two companies worked together in the development of the SAS Orlando Release to provide a 32-bit version of the SAS System that exploits all current Windows operating systems.

 - SAS is also working with Microsoft to provide full compatibility with Microsoft's new BackOffice suite of products.

- Digital Equipment Corporation—SAS Institute became a Digital Cooperative Marketing Partner in 1987. The alliance covers OpenVMS on VAX systems and ULTRIX on RISC-based systems.

 - In 1990, SAS Institute and Digital began working together on Digital's 64-bit Alpha AXP RISC systems, and SAS implemented the SAS System to support Alpha.

 - Recently the companies entered into an engineering and marketing agreement to bring the benefits of 64-bit computing to rapid data warehousing, database marketing, and decision support systems.

- Intel Corporation—In 1995, SAS Institute was part of the early testing program for the new Pentium Pro chip from Intel, and continues to work closely with Intel in developing and planning upcoming hardware and software technology.

- Apple Computer, Inc.—SAS Institute is a member of Apple's Partners Program. The marketing and development relationship resulted in the release of the SAS System for Macintosh platforms in 1995.

- Sun Microsystems—SAS Institute is a Catalyst Premier Partner and is involved with Sun in joint technology exchanges, joint marketing, and communications programs.

- Hewlett-Packard—SAS Institute is a member of the HP Channel Partner program and continues to be a supplier of software solutions on the HP 9000 platform. For the past two years, Hewlett-Packard has been the fastest growing major UNIX platform for SAS System licenses.

Other vendors with whom SAS Institute has business relationships include the following:

- Hardware vendors—Amdahl Corporation, AT&T/Global Information Solutions, Axil Computers, Bull Systems, Compaq, Comparex, Concurrent, Control Data, Dansk Data Electroniques, Data General, Fujitsu, HaL Computers, Hitachi, ICL, MasPar Computer Corporation, Motorola, NEC Technologies, Pyramid Technology, Sequent, Siemens Nixdorf, Silicon Graphics, Sony Corporation, Tadpole Technology, Tandem, and Unisys

- Software vendors—Attachmate Corp., Bitstream, Inc., Borland International,

© INPUT 1996. Reproduction prohibited.

Cincom Systems, Computer Associates, Interleaf, Intersolv, Inc., Landmark Graphics, Lotus Development, Netscape, Novell, Inc., OpenConnect Systems, Persoft, Segue Software, Inc., Sterling Software, SunSoft, Inc., Syncsort Inc., Taligent, TriTeal Corp., and Visionware

- Peripherals vendors—Cabletron Systems, Computer Corporation of America, Concord Communications, Inc., Digital Communication Associates, Eastman Eicon Technology, Hummingbird Communication, Kodak, QMS, Seiko Instruments USA, Talaris Systems, Tektronix, Xerox, and Zephyr Development

- Information suppliers—Claritas Inc., Compuserve Data Technologies, Dow Jones, Geographic Data Technologies, Inc., Reuters America, and S&P Comstock

Competition

SAS Institute's principal competitors, by specific application area, include the following:

- Data management—Information Builders' FOCUS

- Graphics—Computer Associates' DISSPLA and TELL-A-GRAF

- Statistical analysis—SPSS

- Database management systems—Information Builders' FOCUS, Computer Associates' RAMIS, and Must Software International's NOMAD

- C compiler products—IBM

- EIS—Comshare, Information Resources Inc., Pilot Executive Software

INPUT Assessment

SAS Institute's large investment in R&D is its greatest strength, keeping the company's software on the leading edge and giving it a competitive advantage.

The company feels that its greatest challenge is the ongoing battle against the impression in the marketplace that the SAS System is merely a stat package, when in fact it has far greater capabilities.

© INPUT 1996. Reproduction prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

October 1996

SBC Communications, Inc.

Chairman & CEO: Ed Whitacre, Jr.
175 E. Houston
P.O. Box 2933
San Antonio, TX 78299-2933
Phone: (210) 821-4105
Fax: (210) 351-2071
Internet: http://www.sbc.com

Status:	Public
Employees:	60,100 (6/96)
Revenue:	$12,669,700,000
Fiscal Year End:	12/31/95

Key Points

- SBC Communications is one of the world's largest diversified telecommunications companies, with more than 28 million customers worldwide.
- In April 1996, SBC Communications and Pacific Telesis Group announced a definitive agreement to merge. The new company will become one of the world's largest telecommunications companies, serving seven of the nation's 10 largest metropolitan areas and 16 of its 50 largest markets.
- In October 1996, SBC launched Internet access services in the Dallas/Ft. Worth area.
- In July 1995, SBC announced a strategic realignment to position the company as a single-source provider of telecommunications services.

Company Description

SBC Communications provides telecommunications products and services under the Southwestern Bell and Cellular One brands. Its businesses include wireline and wireless services and equipment in the U.S. and interests in wireless businesses in Europe, Latin America, South Africa, and Asia; business and consumer telecommunications equipment; messaging services; cable television in both domestic and

© INPUT 1996 Reproduction prohibited

international markets; and directory advertising and publishing.

In April 1996, SBC Communications and Pacific Telesis announced a definitive agreement to merge.

- The merger involves an exchange of stock with current Pacific Telesis stockholders receiving 0.733 shares (subject to certain adjustments) of SBC common stock for each of their shares. After the tax-free exchange, 66% of the combined company's stock will be retained by SBC shareholders and 34% by Pacific Telesis investors.
- On July 31, 1996, the shareholders of SBC and Pacific Telesis each approved the transaction.
- The merger is expected to be approved within the first quarter of 1997. It must be approved by the California Public Utilities Commission, the U.S. Department of Justice, and the Federal Communications Commission.
- The company will be known as SBC Communications, Inc., with Edward E. Whitacre, Jr. serving as chairman of the board and chief executive officer. Phil Quigley will be vice-chairman of the board and second in command; he will continue to operate exchange operations in California and Nevada.
- Upon completion of the merger, SBC will have more than 100,000 employees, revenues of more than $21 billion, operating cash flow of $9 billion, and income of almost $3 billion.
- The combined operations will serve, among others, the nation's two most populous states—California and Texas—seven of the country's 10 largest metropolitan areas, and 16 of the top 50 markets. SBC Communications, Inc. will serve more than 30 million access lines in high-growth areas and have access to more than 80 million potential wireless customers across the country.
- The combined company will offer products and services under brand names including Southwestern Bell, Pacific Bell, Cellular One, and Nevada Bell.
- Strategically, the merger is expected to create a telecommunications company with a focus on the growing Latin American and Asian markets and enhance the combined company's ability to compete successfully in the U.S. long-distance market.
- The new company plans to take advantage of SBC's strengths in product development, marketing, and sales, and Pacific Telesis' network engineering skills, efficiency in process management, and cost containment.
- Though the corporate headquarters will be in San Antonio (TX), the company will maintain headquarters of Pacific Bell and Nevada Bell in California and Nevada. In addition, a new company will be headquartered in California to provide integrated administrative and support services for the combined companies.
- California will also be the headquarters of the company's long-distance, Internet, and international operations. The wireless headquarters will be in Dallas.

Organization and Structure

During 1995, SBC announced a strategic realignment to position the company as a single-source provider of telecommunications services.

© INPUT 1996 Reproduction prohibited.

- All of SBC's operations within its five-state area (Arkansas, Kansas, Missouri, Oklahoma, and Texas) now report to one management group, while international operations and domestic operations outside the five-state area report to a separate managing group.

- The realignment is intended to improve SBC's ability to keep close to its customers and increase its speed and agility in responding to customers' communications needs.

- In connection with this realignment, during 1995 SBC recognized $138.7 million in selling, general, and administrative expenses associated with consolidating operations within the five-state region, streamlining support and administrative functions, and integrating financial systems. The charge reduced net income by approximately $87.5 million.

SBC's principal operating subsidiaries include the following:

- Southwestern Bell Telephone Company, with approximately 48,175 employees, provides voice, data, and video communications through more than 14.2 million access lines for more than 13 million customers in its five-state region—Arkansas, Kansas, Missouri, Oklahoma, and Texas. Through Southwestern Bell Telecommunications, Southwestern Bell Telephone also markets telecommunications equipment for businesses and homes.

- Southwestern Bell Internet Services provides Internet access services.

- Southwestern Bell Messaging Services, with approximately 230 employees, provides personal automated voice messaging services under the registered trademark CallNotes to business and residential customers in Arkansas, Kansas, Missouri, Oklahoma, and Texas.

- SBC Media Ventures, with approximately 480 employees, operates cable television systems in the counties of Arlington (VA) and Montgomery (AL).

- Southwestern Bell Video Services develops advanced broadband networks that will provide residential and business customers with video on demand, home shopping, access to information, and associated services.

- Southwestern Bell Mobile Systems, with 5,670 employees, provides wireless services to approximately four million customers. Mobile Systems operates in 62 U.S. markets, including five of the top 15 cities.

- Southwestern Bell Communications Services, Inc. provides long-distance services to cellular customers.

- Southwestern Bell Yellow Pages, with approximately 2,400 employees, and other SBC units publish nearly 1,500 directories a year and provide a variety of advertising, marketing, and graphic design services.

Company Strategy

To continue its level of performance, SBC will continue to build value for shareholders, diversify beyond telephone service, actively seek opportunities globally, pursue growth areas in the telecommunications industry, and execute a disciplined strategy for growth.

The company has identified three rules of the new marketplace: perceived best value wins; confuse customers and you lose; and brand breaks ties if customers don't detect differences in value.

© INPUT 1996 Reproduction prohibited.

SBC's strategies for its in-region businesses are to:

- Provide a range of technologically advanced, high-quality services and products
- Package offerings in attractive, competitive combinations to meet customers' changing expectations
- Compete aggressively with innovative service approaches and expanded distribution and sales channels

Strategies for national businesses (outside the five-state region) are to:

- Strengthen the company's position as a premier wireless communications company in the markets it serves
- Develop additional opportunities by providing expanded services, including local and long-distance telephone service
- Pursue opportunities for entry into additional markets

Internationally, SBC's strategies are to:

- Develop international businesses through addition of management, technical, and marketing expertise
- Expand international holdings by pursuing additional business opportunities
- Build alliances with strong international companies capable of helping develop these new opportunities

Financials

A five-year financial summary follows:

SBC Communications, Inc.
Five-Year Financial Summary
($ Millions, except per-share data)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	$12,669.7	$11,721.8	$10,840.2	$10,150.0	$9,460.0
• Percent change from previous year	8%	9%	7%	7%	2%
Income before taxes and changes in accounting	$2,792.3	$2,433.8	$2,060.2	$1,869.7	$1,644.2
• Percent change from previous year	15%	18%	10%	14%	7%
Net income (loss)	$(930.0)	$1,648.7	$(845.2)	$1,301.7	$1,076.0
• Percent change from previous year	(a) (156%)	295%	(b) (165%)	21%	(2%)
Earnings (loss) per share	$(1.53)	$2.74	$(1.41)	$2.17	$1.79
• Percent change from previous year	(156%)	294%	(165%)	21%	(2%)

(a) Includes a nonrecurring charge of $2.8 billion from discontinuing regulatory accounting procedures.

(b) Includes charges of $2.13 billion associated with the cumulative effect of changes in accounting principles and an extraordinary loss of $153 million for early payment of debt.

© INPUT 1996 Reproduction prohibited.

- During 1995, SBC recorded an extraordinary loss of $2.8 billion ($4.63 per share) from the discontinuance of regulatory accounting at Southwestern Bell Telephone.
- As a result, the net loss for 1995 was $930 million, compared to net income of $1.65 billion for 1994.

Interim Results

Revenue for the six months ending June 30, 1996 reached $6.53 billion, up 10% over revenue of $5.93 billion for the same period a year ago. Net income for the period rose 15%, from $837.2 million to $965 million.

- Revenue from local landline services rose 9% and local wireless services rose 21%.
- Network access revenue rose 5.6% for interstate and 8.4% for intrastate services.
- Long-distance service rose 10.7%, while directory advertising declined 7.7% due to the January 1996 sale of SBC's publishing contracts for GTE's service areas to GTE Directories.
- The primary factor contributing to the increase in net income was growth in demand for services and products at Southwestern Bell Telephone and Southwestern Bell Mobile Systems.

Revenue Analysis by Product/Service

Approximately 52% of SBC's 1995 revenue was derived from local service, 24% from network access, 7% from long-distance service, 7%, from directory advertising, and 10% from other services, which include Southwestern Bell Telephone's nonregulated services and products, equipment sales at Mobile Systems and Southwestern Bell Telecommunications, billing and collection services for interexchange carriers provided by Southwestern Bell Telephone, and cable television services provided by SBC International and Media Ventures.

SBC Communications, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Local service						
- Landline	$4,302.3	34%	$4,039.1	34%	$3,904.9	36%
- Wireless	2,247.1	18%	1,748.7	15%	1,282.5	12%
Network access						
- Interstate	2,034.4	16%	1,912.5	16%	1,804.7	17%
- Intrastate	1,032.3	8%	944.5	8%	880.7	8%
Long-distance service	840.5	7%	917.1	8%	977.3	9%
Directory advertising	953.1	7%	946.8	8%	869.0	8%
Other	1,260.0	10%	1,263.1	11%	1,121.1	10%
Total	$12,669.7	100%	$11,771.8	100%	$10,840.2	100%

© INPUT 1996. Reproduction prohibited.

Market Financials

SBC derives its revenue from a range of businesses, government entities, and consumers.

Geographic Markets

One hundred percent of SBC's revenue is derived from the U.S.

SBC's international operations are primarily accounted for under the equity method of accounting.

Acquisitions

In October 1995, SBC combined its U.K. cable television operations (jointly owned with Cox Communications, Inc.) with those of TeleWest Communications, PLC, a publicly held joint venture between Telecommunications, Inc. and U S WEST. The resulting entity, TeleWest PLC, is the largest cable television operator in the U.K. SBC owns approximately 15% of the new entity.

During 1995, SBC purchased a wireless system serving Watertown (NY), obtained a controlling interest in a wireless property serving the Laredo (TX) area, and obtained at auction PCS licenses in Memphis (TN), Little Rock (AK), and Tulsa (OK). In August 1996, SBC announced an agreement with AT&T whereby SBC would swap its Memphis and Little Rock PCS licenses for cellular licenses in Arkansas. The transaction is expected to be finalized in the first quarter of 1997.

During 1995, SBC made an equity investment in Chile, purchasing 40% of VTR S.A., a privately owned telecommunications holding company, for $317 million. VTR provides local, long-distance, wireless, and cable television services in Chile and is 51% owned by Grupo Luksic.

During 1995, SBC also made an equity investment in MTN, a South African wireless company.

During 1994, SBC purchased two cable television systems located in Montgomery County (MD) and Arlington (VA) for $650 million.

Also in 1994, SBC acquired the domestic wireless business of Associated Communications Corporation for $680 million, including wireless systems in Buffalo, Rochester, Albany, and Glens Falls (NY). In two separate transactions, SBC also purchased smaller wireless systems in Syracuse, Utica, and Ithaca (NY) that are adjacent to the Associated Communications' properties.

In October 1994, SBC formed an alliance with Compagnie Générale des Eaux (CGE) through which SBC acquired an indirect 10% ownership of Société Française du Radiotéléphone S.A., a nationwide cellular company in France, and minority ownership interests in other communications businesses controlled by CGE. As part of the agreement, CGE gained a 10% interest in SBC's wireless operations in Washington D.C.-Baltimore and surrounding rural markets.

Employees

As of December 31, 1995, SBC had approximately 59,300 employees.

As of June 30, 1996, the company had approximately 60,100 employees.

Key Products and Services

Telephone Services

Southwestern Bell Telephone Company (SWBT) is SBC's largest subsidiary, accounting for 71% of revenue and 63% of earnings during 1995. SWBT provides basic

© INPUT 1996 Reproduction prohibited.

telephone service as well as a range of telecommunications products and services.

- By the end of 1995, SWBT had installed more than 1.2 million miles of fiber-optic cable across its five-state operating region, preparing for advanced network services such as lSDN and increased reliability.

- The installation of new network technologies such as lSDN and SONET has expanded SWBT's network capability to include voice, data, and video transmissions. Another network enhancement is Advanced Intelligence Network (AIN), which allows customers to have network access regardless of the hardware in place along the network.

- ln March 1996, SBC, Bell Atlantic, GTE, and Pacific Bell announced an agreement to jointly promote the services of their intelligent networks (lNs). lntelliBridge℠ is a business service targeted to midsized and large companies with operations throughout North America that provides customers with a single point of contact for all of their lN needs.

- Optional call management services include Caller lD, Call Waiting, Call Blocker, and automated messaging services.

- PC Phone Manager, introduced in 1996, is a computer telephony integration (CTl) software program that enables users to manage their calls by graphically recreating their phone on a computer screen.

 - The product, which was jointly developed with Algo Communications Corp., is designed for small businesses, those who work at home, and PC enthusiasts.

 - PC Phone Manager integrates up to 17 of Southwestern Bell's call management services with traditional CTI features, including an automatic log of incoming and outgoing calls and an address book.

 - The product is Windows-based and lBM compatible, and is priced at $89.95 for users with one phone line.

In October 1996, Southwestern Bell launched Southwestern Bell lnternet Service ℠ in the Dallas/Ft. Worth area.

- The service makes available Netscape Navigator client software, the Infoseek search engine, and SurfWatch for content monitoring.

- SBC has partnered with Ascend Communications, Cisco Systems, and Sun Microsystems to provide the hardware in support of its lnternet offering.

- The monthly fee is $19.95 for unlimited access, or under $17 per month under an annual payment plan.

- SBC expects to have Internet access services available in other major cities within its five-state territory by the end of 1996.

ln July 1996, SBC signed a four-year exclusive memorandum of understanding with Sprint that covers wholesale long-distance services. The agreement with Sprint is expected to allow SBC to enter the long-distance marketplace following regulatory approval.

Through Southwestern Bell Telecom, the company markets business and residential communications equipment, ranging from single-line and cordless telephones to digital PBX systems.

Messaging Services

Through Southwestern Bell Messaging Services, SBC provides CallNotes, an

© INPUT 1996 Reproduction prohibited.

automated, personal voice messaging service, to small business and residential customers.

Interactive Video Services

SelectVideo Plus is a videoconferencing service available through Southwestern Bell Telephone. The service transmits voice, image, and data simultaneously over existing telephone lines using ISDN technology.

Southwestern Bell Video Services is developing advanced broadband network services that will provide residential and business customers with video on demand, home shopping, information access, and other services.

- In December 1995, SBC began an 18-month trial in Richardson (TX) to provide cable TV service to 1,800 customers.
- Microsoft, Lockheed, and Lucent Technologies are working with SBC to provide the necessary software and hardware components for the system.

In April 1995, SBC, The Walt Disney Company, Ameritech Corporation, BellSouth Corporation, and GTE formed a partnership to acquire, package, and market video programming and interactive services under the name americast™.

- The venture will develop services such as video on demand, home shopping, and networked video games. It also will develop and support a navigator to guide consumers through programming and services menus.
- The telecommunications partners will handle the distribution of americast's products and services over their networks.
- The partnership will work with other entertainment and information services companies worldwide and create an open software environment in which applications can be supported on multiple systems.

Cable TV Services

SBC Media Ventures provides cable television services to approximately 258,000 cable customers in the counties of Arlington (VA) and Montgomery (AL) through Cable TV Montgomery and Cable TV Arlington.

Wireless Products and Services

SBC provides wireless services to consumers and businesses nationwide. Through Southwestern Bell Mobile Systems and Cellular One, the company serves four million customers in 62 domestic markets.

- Within its five-state region, SBC has cellular properties in Kansas, Missouri, Oklahoma, and Texas. Arkansas will be added in 1997.
- Mobile Systems operates in areas outside SBC's five-state region under the name of Cellular One by means of licenses from Cellular One Group, a partnership among affiliates of Mobile Systems, AT&T Wireless Services, and Vanguard Cellular Systems, Inc. These areas include metropolitan service areas such as Washington, D.C., Chicago (IL), and Boston (MA) and rural service areas in Illinois, Massachusetts, New York, Virginia, and West Virginia.

With the enactment of telecommunications reform in February 1996, Mobile Systems began offering interLATA long-distance services to its cellular customers.

In February 1995, Mobile Systems worked with the Richardson (TX) school district to establish ClassLink, a wireless program to link teachers and staff anywhere on campus. The program has been extended to schools in Kansas City (MO) and Washington, D.C.

© INPUT 1996. Reproduction prohibited.

In October 1994, SBC announced a long-term marketing alliance between Mobile Systems and GTE to offer wireless service in each other's Texas wireless markets, using the host company's wireless system. As a result, Mobile Systems provides wireless services in Houston, Austin, and Beaumont and has the right to market wireless service in a number of additional markets, including El Paso and Galveston.

During 1994, SBC entered a consortium of U.S. and Canadian wireless providers (MobiLink) to provide customers with roaming flexibility outside of each company's operating territory.

Mobile Systems also provides digital service in Chicago, St. Louis, Dallas-Ft. Worth, and Washington D.C.-Baltimore.

Mobile Systems also markets wireless communications equipment in each of its service areas to customers entering into wireless service contracts.

Advanced Technology Resources

Southwestern Bell Technology Resources, Inc. (TRI) is a research and development division of SBC whose mission is to design and develop next-generation telecommunications equipment and services.

Research and development efforts are focused on the following areas:

- Broadband delivery systems, which will serve as the foundation for video and multimedia services and the development of video-to-home services over existing telephone lines
- Information technology, focusing on developing strategies and the application of key evolving computer technologies to further the business interests of SBC. A key area of research is emerging Internet technologies and their applications.
- Intelligent networks, developing solutions that allow SBC to bring to market a variety of advanced customized services for its customers in wireless, wireline, and other access networks, including number portability and advanced messaging services
- Video networks, finding new video technology in such areas as entertainment video, videoconferencing, interactive video, and multimedia
- Voice technologies, both new and enhanced, in such areas as voice-activated dialing, voice recognition, and voice command functions
- Wireless networks, including development and enhancement

International Operations

In the U.K., SBC owns approximately 15% of cable television operator TeleWest PLC.

In France, SBC has a 10% share of Société Francaise du Radiotelephone, a major French cellular provider.

In Chile, SBC has a 40% equity in VTR S.A., a privately-owned telecommunications holding company providing long-distance, local, and wireless telephone services and cable television.

In Mexico, through a consortium formed in 1990 with France Telecom and Grupo Carso, SBC has a controlling interest in Teléfonos de México (Telmex). SBC has a 10% equity interest in Telmex. SBC has been serving as a consultant and technical advisor to Telmex in areas such as wireless, network maintenance, directories, customer service, and billing.

© INPUT 1996 Reproduction prohibited.

In Israel and Australia, SBC International has interests in companies involved in publishing yellow pages directories and marketing directory software.

SBC International also has wireless interests in South Korea (8.3% equity in Shinsegi Mobile Communications Company, Limited) and South Africa (equity investment in MTN).

Marketing and Sales

SBC has strong distribution systems, both in-region and out-region.

- In-region, all SBC subsidiary operations in specific geographic regions are under a single management structure.
- Out-region, Cellular One management teams are focused on wireless growth and expanding long-distance and local service opportunities in their market areas.

SBC has a combined sales force of more than 5,000 inside sales people; more than 1,500 outside sales people; 2,000 retail locations, agents and subagents; a catalog; and other channels of distribution.

Assessment

SBC's strengths include:

- Presence in high-growth geographic markets, both domestically and internationally
- Strong brand names (Southwestern Bell and Cellular One)
- Strong fundamental revenue growth in a strong industry
- Successful diversification

Challenges over the coming year include:

- Finalizing the merger with Pacific Telesis
- Working with federal and state regulators to finalize the rules (pricing, reselling of services, etc.) that will open markets to competition
- Preparing to deal with increased competition from a growing number of service providers

© INPUT 1996 Reproduction prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

April 1998

Science Applications International Corporation (SAIC)

Chairman & CEO **J.R. Beyster**
Vice Chairman **W.A. Owens**
10260 Campus Point Drive
San Diego, CA 92121
Phone: **(619) 546-6000**
Internet: **www.saic.com**

Status:	Employee Owned
Employees:	25,000
Revenue:	$2,400,000,000*
Fiscal Year End:	1/31/97

*Does not include Bellcore acquisition

Key Points

- Science Applications International Corporation (SAIC) is the largest employee-owned research and engineering company in the United States. SAIC offers a broad range of expertise in the areas of information technology, systems integration, national and international security, transportation, telecommunications, health systems and services, energy, and environmental systems and engineering.
- SAIC completed the acquisition of Bellcore in November 1997. Bellcore now operates as a wholly owned subsidiary of SAIC. The combined companies will have an estimated annual revenue of nearly $4 billion.
- With the Bellcore acquisition, SAIC generates about 54 percent of its business through federal and state government contracts, two-thirds of which are in the national security area. Approximately 46 percent of SAIC's business is commercial and international.

© 1998 by INPUT. Reproduction prohibited.

Company Description

SAIC is a leading systems integrator, a leading research and development (R&D) firm, a government contractor and major builder of the country's defense information infrastructure, and a provider of solutions in information technology, data security, electronic commerce, and the Internet and intranets.

Founded by a small group of scientists in 1969, SAIC has had 28 years of sustained growth. SAIC has approximately 25,000 employees, more than 350 locations worldwide, and annual revenues exceeding $2.4 billion.

SAIC provides its clients a full range of technical services including requirements analysis; system architectures; system design; system migration strategies and plans; software design, development and installation; data base selection, design and implementation; hardware and software integration and installation; network design and installation; telecommunications engineering; systems testing; user training; life-cycle management and support, and systems operations. SAIC provides services to federal, commercial, and international customers in a variety of market areas, including information technology, systems integration, national and international security, telecommunications, health systems and services, transportation, energy, and environmental systems and engineering.

SAIC offers many of its employees an opportunity for stock ownership in the company, either by direct purchase or through several stock option plans. Since the stock is not publicly traded, liquidity is provided by the internal market operated four times a year by Bull, Inc., a wholly owned broker/dealer subsidiary.

Company Strategy

SAIC has a number of strategic objectives. An outline of key objectives is below:

- Build a preeminent professional services organization renowned for its contributions in information technology, telecommunications, health, defense, energy, environment, transportation, and law enforcement.
- Contribute significantly to national and international efforts in defense, energy, environment, transportation, telecommunications, justice, and health.
- Continue to practice the concept of employee ownership to ensure that those who contribute receive the rewards for SAIC's success.
- Maintain an earned reputation for products of the highest quality and a commitment to client satisfaction.
- Manage SAIC so that it continues to grow as a stable and useful component of U.S. business.

Corresponding to its strategic objectives, SAIC plans to develop additional and ongoing proficiency in telecommunications and networking, software and systems engineering, and systems integration.

© 1998 by INPUT. Reproduction prohibited.

Organization and Structure

SAIC's corporate staff is divided into the areas of Administration, Accounting/Finance, Facilities Management, and Corporate Development. These organizations provide specialized support to the SAIC groups in many areas, including: legal, accounting, contracts, purchasing, security, marketing, human resources, and stockholder relations. Most of the corporate staff is located in San Diego, CA, and McLean, VA.

SAIC continues to review the changing environment and reformat itself to become more organizationally efficient. To that end, the FY98 corporate organization consists of 38 groups, which have been aggregated into 13 sectors.

The sectors principally address military science and technology, major federal and commercial technical agencies, hard sciences, communications and information technology, systems applications and design, energy, environment, engineering, health care, and transportation.

In the SAIC organizational structure, operating divisions are assigned to operating groups. The SAIC operating divisions are the functional activities that perform the work, with each division being a center of expertise in a specific technology or specific type of work. Each of the operating divisions is assigned to an SAIC operating group for management, administrative, and marketing support.

The SAIC sectors and groups are each managed by an executive vice president or a senior vice president. These managers coordinate the technical work performed by their divisions and provide resources that have been centralized at their respective sector/group level.

SAIC's operating groups are summarized in Exhibit 1.

© 1998 by INPUT. Reproduction prohibited.

Exhibit 1

SAIC Organization by Sector

ADVANCED TECHNOLOGY AND ANALYSIS SECTOR • Applied Technology Group • Defense Analyses Group • Defense Technology Group • Technology Analysis and Applications Group Test and Evaluation Group	MARITIME TECHNOLOGY SECTOR SCIENCE AND ENGINEERING SECTOR • Biomedical Sciences Group • Major Programs Group
AMSEC COMMERCIAL TECHNOLOGY • Information Resources Group • INTESA Utilities Outsourcing Group	STUDIES AND SYSTEMS SECTOR • National Security Studies and Strategy Group • Space, Earth and Atmospheric Sciences Group
ENERGY, ENVIRONMENT, AND ENGINEERING SECTOR • Energy and Environment Group • Energy Systems Group • Engineering and Environmental Management Group Environmental and Health Sciences Group	TECHNOLOGY AND ADVANCED SYSTEMS SECTOR • Applied Systems Group • ASSET Group • Space and Defense • Technology Research
HEALTH CARE TECHNOLOGY SECTOR • Commercial Group • Customer Service and Support Group Federal Group	TECHNOLOGY APPLICATIONS SECTOR • Network Solutions, Inc. • Technology Applications Group • Telecommunications Technology Group
INFORMATION AND TECHNOLOGY SYSTEMS SECTOR • Command & Control (C2) and Advanced Information Technology Group • Information Systems and Technology Group • Range and Information Systems Group Software and Systems Integration Group	TECHNOLOGY SOLUTIONS SECTOR • Information and Engineering Solutions Group • Information Systems Solutions Group • Information, Training, and Security Solutions Group Software Engineering Solutions Group
LOGISTICS AND TRANSPORTATION SECTOR • Engineering, Logistics, and Information Systems Group • TransCore Group	

Source: SAIC

© 1998 by INPUT. Reproduction prohibited.

SAIC has over 35 subsidiaries and equity partners. SAIC's major operating subsidiaries include the following:

- American Systems Engineering Corp. (AMSEC) Subsidiary provides maintenance engineering and technical support services to U.S. Navy and Marine Industry customers. AMSEC has over 1,000 employees.
- Bellcore (Morristown, NJ) is a leading provider of communications software, engineering, and professional services. Prior to the SAIC acquisition, Bellcore was owned by the regional Bell operating companies (RBOCs). Bellcore has over 5,200 employees and reported 1997 revenues of over $1 billion.
- General Sciences Corporation (Laurel, MD) provides scientific research, software development, and systems development and integration services to governments and private industries worldwide.
- Network Solutions, Inc. (Herndon, VA), acquired in May 1995, is a network integration subsidiary that offers internet and intranet services, network integration and outsourcing services to major federal, state and commercial clients, and research, development and implementation of network security, firewall and intrusion monitoring software. Network Solutions operates the Internet Network Information Center (InterNIC), the Defense Data Network (DDN), and the Security Coordination Center for the DDN.
- Pathology Associates International Corporation (Frederick, MD), acquired in June 1995, provides preclinical biomedical product development, health effects assessment studies, and related biomedical research support services.
- R.E. Wright, Inc., serving as an outsourcing vendor, builds and operates water, wastewater and environmental treatment systems for industrial companies and government agencies.
- Vaikunt Technologies International Corporation (VTI) provides software systems to assist pharmaceutical companies with drug development and discovery and in achieving government approval and certification of new medicines.

SAIC's major affiliates include:

- The Carreker Group is a leader in banking technology and services, and a pioneer in the development and application of electronic check presentment. In 1996, The Carreker Group formed an alliance with SAIC in order to assist banks and other financial institutions in the transition from paper-based to electronic transactions, developing innovative and profitable ways for these organizations to use electronic commerce with consumers, corporations, government agencies and other financial institutions.
- Danet, founded 1976, is based in Darmstadt, Germany. Danet provides information technology consulting, software development, systems integration and products, turnkey mobile communication systems and banking systems. Danet is

© 1998 by INPUT. Reproduction prohibited.

approximately 42% owned by SAIC, with the remainder owned by Deutsche Telekom and Danet employees.

- Intesa™, located in Venezuela, is the largest information technology services company in Latin America with more than 1,500 employees. SAIC will own 60 percent of Intesa™, and PDVSA (Petróleos de Venezuela, S.A) the other 40 percent. As part of the joint venture, PDVSA's 13 business units will outsource their information technology services to Intesa™.

- In February 1997 SAIC purchased 20 percent of Leadership 2000, Inc. In 1998, SAIC will increase its ownership by another 20 percent and it will buy 20 percent again in 1999. Founded in 1986, Leadership 2000 specializes in change management and strategic planning to improve process engineering and reinvention in the workplace. With corporate headquarters in Phoenix, Arizona, Leadership 2000 has offices in Los Angeles, California; Washington, D.C.; and Tucson, Arizona. The consortium also has a network of 41 consultants and consulting organizations worldwide serving 27 additional cities in the United States, Europe and Latin America.

- Tecsi, founded in 1971 and based in Paris, designs, integrates and operates digital billing and call center systems for telecommunications applications; also offers information technology consulting services, software development services and integration of new technologies such as real-time interactive video and desktop conferencing systems. Tecsi is approximately 43% owned by SAIC, with the remainder owned by France Telecom and Tesci employees.

Financials

SAIC's fiscal 1997 revenue reached $2.4 billion, a 12% increase over fiscal 1996 revenue of $2.16 billion. Net income rose 11%, from $57.3 million in fiscal 1996 to $63.7 million in fiscal 1997. A five-year financial summary follows.

Exhibit 2

Science Applications International Corporation Five-Year Financial Summary
($ Millions, except per share data)

Fiscal Year	1997	1996	1995	1996	1995
Revenue	$2,402.2	$2,155.7	$1,921.9	$1,670.9	$1,504.1
Percent change from previous year	11%	12%	15%	11%	17%
Income (loss) before taxes	113.2	102.3	79.7	69.8	60.1
Percent change from previous year	11%	28%	14%	16%	8%
Net Income	63.7	57.3	49.1	41.5	38.1
Percent change from previous year	11%	17%	18%	9%	13%
Earnings (loss) per share	1.23	1.13	1.01	0.89	0.83
Percent change from previous year	9%	12%	13%	7%	11%

Source: SAIC

© 1998 by INPUT. Reproduction prohibited.

Revenue Analysis by Product/Service

SAIC's operations are classified into two broad segments–Technical Services and Products. The Technical Services segment is further classified into the National Security, Health, Environment, Energy, and other business areas. Other business areas include health, space, transportation, and commercial information technology.

Technical Services consist of applied and basic research; analysis and development of new and existing policies, concepts, systems, and programs; design and systems, and programs; design and development of computer software; systems engineering; systems integration; test and evaluation of new products or systems; technical operational and management support; environmental engineering; and engineering support to existing facilities, laboratories, and systems.

Products include custom-designed and standard hardware and software products such as data display devices, "ruggedized" personal computers, sensors, and nondestructive imaging instruments. These products typically incorporate SAIC-developed hardware and software, as well as hardware and software manufactured by others.

A three-year summary of source of revenue by business segment follows:

Exhibit 3

Science Applications International Corporation
Three-Year Source of Revenue Summary ($ Millions)

Product/Service	Fiscal Year					
	1997	(%) of Total	1996	(%) of Total	1995	(%) of Total
Technical Services						
National Security	$1,046.9	44%	$966.9	45%	$891.2	46%
Health	332.1	14%	304.2	14%	206.4	11%
Environment	260.2	11%	274.3	13%	264.5	14%
Energy	118.2	5%	142.2	8%	169.7	9%
Other (a)	489.9	20%	320.1	14%	217.8	11%
Products	153.5	6%	146.7	7%	170.3	9%
Interest income	1.4	-	1.3	-	1.9	-
Total(b)	$2,402.2	100%	$2,155.7	100%	$1,921.9	100%

(a) Includes space, transportation, and commercial information technology
(b) Differences due to rounding.

Source: SAIC

Although National Security revenues have declined as a percent of total revenues, these revenues increased 8% in fiscal 1997 to just over $1 billion.

Other Technical Services revenues were 20% during fiscal 1997, 14% during fiscal 1996, and 11% during fiscal 1995, reflecting the company's expansion into the transportation and commercial information technology markets.

© 1998 by INPUT. Reproduction prohibited.

Product revenues were 6% of total revenue during fiscal 1997. Subsequent to the 1997 fiscal year end, on March 7, 1997, SAIC sold the majority of net assets of the SAIT business unit, which accounted for 49% of SAIC's product revenues in 1997.

The mix of contracts for fiscal 1997 consisted of 54% cost reimbursement, 22% time and materials and fixed-price level-of-effort, and 24% firm fixed-price, compared to 54% cost reimbursement, 26% time and materials and fixed-price level-of-effort, and 20% firm fixed-price in fiscal 1996.

Revenues for fiscal 1998 are expected to reach $2.4 billion.

Market Financials

Revenue from the U.S. government, either as a prime contractor or subcontractor, accounted for 79% ($1.91 billion) of SAIC's total revenue in fiscal 1997, compared to 83% ($1.79 billion) of total revenue in fiscal 1996, and 86% ($1.65 billion) of total revenue in fiscal 1995.

The remainder of SAIC's revenue ($365 million in fiscal 1996, $270 million in fiscal 1995, and $200 million in fiscal 1994) was derived from state and local government and commercial clients.

SAIC's principal markets include national security, energy, environment, health, space, transportation, and information technology.

Geographic Markets

Virtually all of SAIC's revenue is derived from sales to U.S. customers.

Locations

SAIC has offices in more than 350 locations throughout the U.S. and in strategic locations overseas. Major SAIC office complexes/technology centers house computer centers; laboratories; word processing centers; art, illustration and reproduction centers; technical libraries; and administrative support services.

Key geographical locations are in Albuquerque, Anchorage, Arlington, Atlanta, Boston, Chicago, Colorado Springs, Dallas, Dayton, Denver, Frederick (MD), Hampton Roads (VA), Harrisburg, Honolulu, Houston, Huntsville, Idaho Falls, Indianapolis, Las Vegas, Los Angeles, New York, McLean (VA), Oak Ridge (TN), Omaha, Orlando, Sacramento, San Antonio, San Diego, San Francisco, Santa Barbara, Seattle, Tucson, and Washington, D.C.

International offices are in Australia, Canada, the Czech Republic, Colombia, France, Germany, Hong Kong, Iceland, Indonesia, Israel, Italy, Japan, Jordan, Korea, Mexico, New Zealand, the Philippines, Portugal, Russia, Saudi Arabia, Spain, Thailand, Turkey, the United Arab Emirates, the U.K., Venezuela, and Vietnam.

© 1998 by INPUT. Reproduction prohibited.

Laboratories are located in Albuquerque, Dayton, Goleta (CA), Idaho Falls, Las Vegas, McLean (VA), Newport (RI), San Diego, Seattle, and Tucson.

Employees

SAIC's employees are segmented approximately as follows:

Technical/professional	78%
Managerial	13%
Administrative	9%

*Academic Degree Level**

Ph.D.	9%
Masters of Science	37%
Bachelor of Science	54%

*Degree holders represent 79% of the professional staff.

Academic Degree Discipline

Sciences	45%
Engineering	24%
Business/Economics/Law	18%
Humanities/Social Sciences	13%

At the end of fiscal 1997 SAIC had 20,900 full-time employees, compared to 19,500 at the end of fiscal 1996 and 16,700 at the end of fiscal 1995. As of October 1997, SAIC had 24,889 employees, including about 1,000 overseas employees, counting both nationals and expatriates.

Key Products and Services

This section will focus on the information services provided by SAIC. Services are primarily engaged in the health care, national security, space, energy & environment, and transportation industries.

SAIC's systems integration services include analysis/requirements, design, development, installation/testing, and maintenance/ support.

The company's expertise in database management includes database integration, data navigation and mining, database creation/maintenance, extensive Oracle experience, graphical user interfaces, interactive kiosks, pen-based systems, and algorithms/numerics.

SAIC's experience in computer software has included top-level structure, systems architecture, and network designs for major software packages; systems analysis,

© 1998 by INPUT. Reproduction prohibited.

programming, compiling, and debugging; verification and validation of software developed by SAIC and other firms; software maintenance and conversion or upgrading of software; use of CASE tools; personnel training in software development and maintenance; and systems engineering and technical assistance.

SAIC computer security specialists have experience in penetration analysis and evaluation; vulnerability analysis and evaluation; security risk assessment; secure system design, implementation, and installation; security engineering and trusted software development; contingency planning; security testing; and accreditation. Exhibit 3 lists commercial security services as a subcategory of computer security, with a noted emphasis on financial services markets.

Exhibit 4

SAIC Commercial Security Services

Certificate Management Systems Review, Architecture Design
E-Commerce Security Evaluations
Firewall Penetration Tests
Funds Transfer System Security Evaluation
Global Data Network Security Assessment
Mainframe Security Evaluations/Penetrations
Microsoft NT Security Evaluation
On-Line Banking Penetration Tests
Remote Access Security Assessment/Penetrations
Securities and Trading Systems Security Evaluations
Security Management System Product Evaluation
Telecommunications ATM-Based Full-Service Network Assessment
Web Site Security Assessment

Source: SAIC

SAIC's mainframe-to-client/server migration expertise includes migration strategies, extensive software development migration experience, client/server engineering, LAN performance tuning, LAN management, network security, and Lotus Notes engineering experience.

SAIC's Internet services include helping customers use the World Wide Web and Internet technology for electronic commerce, advertising, and marketing, customer support, public relations, and electronic publishing.

© 1998 by INPUT. Reproduction prohibited.

Energy systems

- Customer care and billing systems
- Pipeline distribution control systems
- Plant information management systems
- Plant process computer systems
- Training systems (accident simulation)

Healthcare technology

- Computer infrastructure design
- Document management systems
- Internet/intranet services
- Network design and implementation

Law enforcement systems

- Database systems

Logistics Systems

- Logistics management systems
- Y2000 services for materials management systems

Software Engineering

SAIC has been designing, developing, and integrating software for major computer-based systems since 1976. Software systems are developed in a wide range of programming languages for commercial and government clients using the SAIC Common Approach to Software Development and Maintenance[SM].

Training

- Virtual university
- Computer-based training
- Interactive distance learning
- Training for industry

© 1998 by INPUT. Reproduction prohibited.

Transportation systems

- Consulting Services
 - Program Development
 - Simulation and Modeling
 - Strategic Planning
- Electronic Toll and Traffic Management
 - Advanced Revenue Collection Systems (ARCS)
 - Automatic Vehicle Identification (AVI)
 - Electronic Toll System Equipment
 - Toll Plaza Animation Simulation Systems (TPASS)
- Intelligent Transportation Systems (ITS)
 - Congestion Management Systems
 - Freeway Management Systems
 - Signal Control Systems
- Motor Vehicle Systems
 - Electronic Clearance Systems
 - Information Systems Modernization
- Rail/Intermodal
 - Automatic Equipment Identification (AEI)
 - Infrared Defect Detection
 - Optical Character Recognition (OCR)
 - Remote Maintenance Services
 - Terminal Management Systems
 - Video Inspection

© 1998 by INPUT. Reproduction prohibited.

Research Centers

SAIC's methodologies and research help formulate and execute U.S. national security policy. These engagements are primarily managed through the Foreign Systems Research Center, the Center for Information Strategy & Policy, the Center for Global Security and Cooperation, and the Center for Verification of Research.

The Center for Information Strategy & Policy explores all aspects of the information revolution including understanding conflict in the information age.

Key Clients

Exhibit 5

SAIC Sample Clients

British Petroleum
Health Alliance of Greater Cincinnati
Kaiser Permanente
NASA
National Cancer Institute
National Meteorological Center
New York City Police Department
Petroleos de Venezuela, S.A. (PDVSA)
PriceCostco
Saint Luke's Hospital (Kansas City, MO)
U.S. Department of Defense
U.S. Department of Energy
U.S. Department of Housing and Urban Development
U.S. Department of Veterans Affairs
U.S. Environmental Protection Agency
U.S. Federal Aviation Administration
U.S. Internal Revenue Service

Source: SAIC

Major Engagements with the U.S. Department of Defense

SAIC is a leading contractor for the development of the U.S. Department of Defense's (DoD) information capabilities. Major engagements include:

- Integrating hardware and correlation/data fusion software and providing operations and maintenance support to deployed Navy systems.

© 1998 by INPUT. Reproduction prohibited.

- Integrating the defense information infrastructure, which will facilitate linking joint command organizations to the military service command and control systems.
- Providing security engineering, encryption technology, and improved training to ensure defense information infrastructure security.
- Requirements analysis, network engineering, and development of network management systems, installations, operations, and maintenance to provide a full range of telecommunications engineering services for the Global Defense Information Systems Network.
- Software integration to provide flexible vertical/horizontal interoperability for military forces over a global network (employing communications, computers, surveillance, reconnaissance, intelligence, and space-based systems).
- Streamline software development for Air Force software-intensive command and control systems and integrate them with defense information infrastructure.
- Systems integration and software development to ensure land forces interoperability/compatibility.
- Upgrading and consolidating DoD's supercomputing functions into four shared resource centers to support weapons development and help DoD become a major force in the national supercomputing community.

SAIC is also a provider of the following defense-related IT systems and applications: simulation technology that links constructive, virtual, and live domains; intelligence systems; logistics systems; maritime technology systems; transportation systems; and undersea warfare applications.

Marketing and Sales

SAIC Corporate Development has 12 full-time market development personnel. Although it varies over time, on average the SAIC Sectors have about 200 people directly assigned to market development. In addition, SAIC has arrangements with outside consultants to assist in marketing specific opportunities.

GSA Advantage!

In January 1997 SAIC was awarded a 70 B/C schedule contract with GSA to provide a broad range of ADP support to include any type of IT products and services to any agency in the U.S. Government. Orders can be placed directly with SAIC, and deliveries can be made directly to the customer.

© 1998 by INPUT. Reproduction prohibited.

Alliances

SAIC has alliances with a range of vendors, including the following:

- Amtrak (rail transportation)
- HBO & Company (health care)
- Pinkerton—Business alliance to offer ENTERSECSM security service covering intellectual property and electronic and physical assets.
- Sybase (health care and oil and gas markets)
- Symmetrix (banking and insurance markets)

Competitors

SAIC's major competitors for information services-related contracts include BDM; Booz Allen Hamilton; Computer Sciences Corporation; EDS; IBM Global Services; PRC (Litton); SRA, Inc.; and Unisys.

Assessment

SAIC's strengths in the information services arena include:

- Significant experience in systems integration projects for the federal government since 1969
- Expansion of offices in international markets
- A network of strategic office locations near its major customers to facilitate communications

Challenges over the coming year include:

- The addition of more than 10,000 new employees over the last two years challenges management to maintain the values that underpin the employee-ownership system.
- Increasing market share in a declining federal market
- Increasing market share in the company's commercial and international business areas

© 1998 by INPUT. Reproduction prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

SCO

President & CEO: **Alok Mohan**
400 Encinal Street
Santa Cruz, CA 95061-1900
Phone: **(408) 425-7222**
Fax: **(408) 427-5448**
Internet: **http://www.sco.com**

Status:	Public
Employees:	1,128 (9/95)
Revenue:	$199,329,000
Fiscal Year End:	9/30/95

Key Points

- SCO, previously known as The Santa Cruz Operation, Inc., is a worldwide leading developer and supplier of UNIX system server software.
- In August 1996, SCO announced three new cross-platform products from its Client Integration Division.
- In June 1996, the company announced a joint development project with Data General, ICL, and HAL to integrate NUMA clustering technology into SCO UnixWare.
- In April 1996, SCO and eight major computer manufacturers formed an alliance to establish SCO UnixWare as the industry standard operating system for volume enterprise servers.
- In April 1996, SCO announced the SCO Internet Family of server products for the Intel platforms.
- In February 1996, SCO and Hewlett-Packard announced a partnership to deliver new 64-bit operating system technologies.
- In February 1996, SCO announced the formation of strategic alliances with NETCOM On-Line Communication Services, Inc., Morning Star Technologies, Netscape, and Micro Computer Systems to

© INPUT 1996 Reproduction prohibited

provide necessary components of SCO's Internet server project.

- In February 1996, the company announced its new Business Critical Internet strategy.
- In December 1995, SCO acquired the assets and core technologies of Novell, Inc.'s UnixWare business.
- In September 1995, SCO, Novell, and Hewlett-Packard established an alliance to deliver a high-volume 64-bit UNIX operating system that includes NetWare and UNIX enterprise services.
- In August 1995, SCO announced its new telecom strategy to provide an open standards-based operating system.
- In August 1995, SCO announced its new Layered Server Products division to provide enhanced Microsoft services, system management services, and Internet services for UNIX servers.

Company Description

SCO was founded in 1979 and became a public company in May 1993. SCO is a leading supplier of UNIX server and host systems, as well as client-integration software that integrates Microsoft Windows PCs and other clients with UNIX servers from all major vendors.

SCO provides system software for Business Critical Servers that run the day-to-day business operations of large branch organizations in retail, finance, telecom, and government, as well as corporate departments and small to medium-sized organizations.

The company's current products include advanced 32-bit operating systems, networking and distributed computing software, user interface products, and development and language tools. SCO OpenServer® and SCO UnixWare are the company's base server products.

Organization and Structure

SCO's corporate and Americas headquarters are located in Santa Cruz (CA), with European and International headquarters situated in Watford, (U.K.). The company's Government Systems Group is located in Reston (VA).

SCO has international offices in Beijing (China), Dusseldorf and Bad Homburg (Germany), Holte (Denmark), Hong Kong, Issy-les-Moulineaux (France), Milan (Italy), North Sydney (Australia), S. de R.L. de C.V. (Mexico), Singapore, Tokyo, and Toronto (Ontario).

SCO's support infrastructure includes several hundred distributors in more than 80 countries, more than 15,000 authorized resellers, 500 vertical solution providers and systems integrators, 140 education centers worldwide, and more than 15,000 applications from 12,000 independent software vendors (ISVs).

SCO's Platform Products Division provides the SCO OpenServer and UnixWare server, as well as desktop and software development systems.

The company's Layered Server Products Division was formed in August 1995, and markets SCO's integration tools, middleware . for SCO OpenServer and UnixWare Systems as well as other UNIX servers, and Internet products.

SCO's Client Integration Products Division was formed in January 1995 with the merging of IXI Limited and VisionWare Ltd., SCO's two subsidiaries that market products for UNIX/Windows integration.

© INPUT 1996 Reproduction prohibited.

Company Strategy

Company Mission

SCO's mission is "to be the leading supplier of UNIX system software for Business Critical Environments," including base operating systems as well as middleware, tools, client-to-UNIX integration, and packaged solutions.

Elements of the company's strategy for achieving this goal include:

- Providing the leading UNIX server and host system software for Business Critical Servers based on Intel processors
- Providing a full line of software products that integrate Windows PCs with UNIX servers from all major vendors
- Providing a line of layered server products that extend the capabilities of SCO servers

Technology and Marketing Strategy

SCO is a technology-focused company—continually striving to be at the forefront of technological innovation, and delivering that technology to the end user through channel partners.

To meet this goal, SCO has five overarching directional strategies:

- Making SCO technology available to all markets through the following:
 - SCO-owned technology, through acquisitions such as IXI, VisionWare, and the UNIX technology and UnixWare businesses from Novell
 - Making SCO's UNIX the standard OS for high-volume enterprise servers
 - Focusing development and marketing on all appropriate markets (SMB and enterprise)
 - Focusing SCO's marketing, sales, and channel partners on reaching all markets
- Leveraging technology and R&D investments from partners across the industry, and incorporating customer requirements into products to create value and differentiation
- Establishing SCO UNIX as the optimal ISV UNIX platform
- Adding value for clients by entering complementary businesses
 - SCO client integration—UNIX /Windows integration as well as cross platform
 - SCO layered products—middleware for advanced functionality of servers
 - SCO Internet products—channel-ready packaged Internet solutions
- Accelerating innovation, including in development, sales, and marketing, as well as in services and support

SCO's long-term goals are to capitalize on four key trends in the information technology industry:

- The improving price performance of Intel CPU-based PCs
- The transition of business-critical applications from mainframes and minicomputers to networks in client/server architectures
- The shift toward increased automation of business operations and the use of information to gain a competitive advantage
- The introduction of Internet network clients and the requirement to support varieties of

© INPUT 1996 Reproduction prohibited.

clients in a heterogeneous Internet-centric network

Internet Strategy

In February 1996, SCO announced its new Business Critical Internet strategy. The four components of the strategy include:

- Making the Internet an integral part of all SCO products, services, training, and partnerships
- Making it easy to build Internet solutions
- Providing ISVs with the tools, training, and services they need to build next-generation Internet applications
- Partnering with other Internet industry leaders to develop the world's best Internet products and services for business customers

SCO is currently focused on penetrating the Internet market with the new SCO Internet Server Family of products.

Financials

SCO's fiscal 1995 revenue reached $199.3 million, an increase of 8% over revenue of $184.0 million in fiscal 1994.

- Net losses of $6.1 million for fiscal 1995 include nonrecurring charges of approximately $18.1 million associated with the acquisition of VisionWare Ltd. ($14.1 million) and work force reductions related to certain restructuring ($4.0 million).
- A five-year financial summary is shown below.

SCO
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	9/95	9/94	9/93	9/92	9/91
Revenue	$199.3	$184.0	$178.2	$163.7	$135.6
• Percent change from previous year	8%	3%	9%	21%	27%
Income (loss) before taxes	$(4.2)	$19.9	$17.3	$9.2	$(11.1)
• Percent change from previous year	(a) (121%)	15%	88%	183%	(217%)
Net income (loss)	$(6.1)	$14.2	$13.8	$8.5	$(11.1)
• Percent change from previous year	(143%)	3%	62%	177%	(217%)
Earnings (loss) per share	$(0.20)	$0.45	$0.47	$0.32	$(0.46)
• Percent change from previous year	(144%)	(4%)	47%	170%	(207%)

(a) Includes nonrecurring charges of $18.1 million.

© INPUT 1996 Reproduction prohibited.

Management attributes revenue growth during fiscal 1995 to an 8% increase in license revenue and a 7% increase in service revenue.

- Fiscal 1995 revenue included revenue from VisionWare Ltd., acquired in December 1994, as well as revenue from OpenServer Release 5, the next-generation operating system released in May 1995.
- Fiscal 1995 losses were attributed to the acquisition of VisionWare Ltd.

Research and development expenditures were approximately $32.2 million (16% of revenue) in fiscal 1995, $28.0 million (15% of revenue) in fiscal 1994, and $26.1 million (15% of revenue) in fiscal 1993. Increases in research and development expenditures in fiscal 1995 were primarily attributed to:

- Increased investment in new product releases, including OpenServer Release 5 and XVision Version 6
- Increased spending to support the new client integration product propositions
- Localization efforts for SCO's current products

Revenue Analysis by Product/Service

SCO derives revenue from two sources: software licenses and fees for services that include engineering services, consulting, custom engineering, support, and training.

Approximately 89% of SCO's revenue for fiscal 1995 was derived from license revenue and the remaining 11% from services.

A three-year source of revenue summary follows:

SCO
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94		9/93	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Processing services	$177.5	89%	$163.7	89%	$159.7	90%
Network services	21.8	11%	20.3	11%	18.5	10%
Total	$199.3	100%	$184.0	100%	$178.2	100%

- License revenue increases for fiscal 1995 were attributed primarily to shipments of VisionWare products as part of SCO's client integration product offerings. Increased unit volume of operating systems also contributed to the growth.
- Service revenue increases for fiscal 1995 were attributed primarily to growth in custom engineering revenue. Increases in support services related to SCO's installed base of products as well as the expansion of this installed base were also cited as contributing to service revenue growth.

© INPUT 1996 Reproduction prohibited.

Interim Results

Revenue for the nine months ending June 30, 1996 reached $152.7 million, compared to revenue of $152.2 million for the same period the previous year.

- Including nonrecurring charges, net loss for the nine-month period was $26.5 million, compared to $3.5 million during the same period in fiscal 1995.
- Nonrecurring charges were related primarily to the purchase of the UNIX business from Novell in 1996 and VisionWare Ltd. in 1995.

Market Financials

SCO targets all major market segments: primary information systems for small and medium-sized businesses, replicated systems for use in distributed information systems in medium-sized and large organizations, including Fortune 1000 corporations, and enterprise opportunities in companies of all sizes.

SCO's products are used in a variety of applications, including commercial applications such as point-of-sale systems, customized computing systems for various vertical business areas, and general business systems.

Key industries to which SCO markets its products and services include retail, finance and banking, government, distribution, telecommunications, transportation, and manufacturing.

Geographic Markets

Approximately 53% ($106.3 million) of SCO's fiscal 1995 revenue was derived from the U.S., and the remaining 47% from international sources.

A three-year geographic source of revenue summary follows.

SCO
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94		9/93	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$106.3	53%	$104.4	57%	$102.6	58%
Europe	92.6	46%	75.8	41%	72.1	40%
Other international operations (a)	9.5	5%	9.0	5%	8.1	5%
(Eliminations)	(9.1)	(5%)	(5.2)	(3%)	(4.6)	(3%)
Total (b)	$199.3	100%	$184.0	100%	$178.2	100%

(a) Other international operation includes subsidiaries in Canada, Japan, Australia, Mexico, and Singapore.

(b) Difference due to rounding.

© INPUT 1996 Reproduction prohibited.

Acquisitions

In December 1995, SCO purchased the assets of Novell, Inc.'s UnixWare business, including the core intellectual property.

- SCO issued approximately 6.1 million shares of SCO common stock in addition to incremental cash payments to be made periodically through 2001, totaling a net present value of $84 million.
- As a result of the purchase, Novell now owns approximately 17% of outstanding SCO common stock.
- Products purchased from Novell, Inc. include:
 - UnixWare Application Server 2.01
 - UnixWare Application Server Processor Upgrade
 - UnixWare Server Merge 2.01
 - UnixWare Personal Edition 2.01
 - UnixWare Software Development Kit 2.01
 - UnixWare On-Line Data Manager 2.01
 - UnixWare Encryption Utilities 2.01
- SCO intends to release products in 1996 and 1997 that merge the SCO OpenServer Release 5 system and UnixWare 2 product lines (code-named Gemini).
- SCO has hired approximately 125 employees to support incremental product development efforts and UnixWare support functions.

In December 1994, SCO purchased VisionWare Ltd., a provider of UNIX/Windows integration software, for approximately $13.7 million in cash and 114,342 shares of newly issued common stock.

- Integration products acquired in the purchase include X-Vision, PC Connect, and SQL Retriever.
- During the first quarter of fiscal 1995, the VisionWare product development team was merged with the IXI product development team to create the SCO Client Integration Products Division.
- The SCO Client Integration Products Division has since introduced the SCO Vision family of products that integrate Windows clients with UNIX servers.

Employees

As of September 30, 1995, SCO had 1,128 employees, segmented as follows:

Marketing and sales	525
Customer support	42
Product development	354
Finance, manufacturing, distribution services, and administration	207
	1,128

- The company currently has approximately 1,200 employees.

Key Products and Services

Products

SCO provides a family of products for desktop computers and servers within an open system architecture.

- The company's products include operating systems, networking systems, Internet servers, user interfaces, client integration software, middleware, and development tools.
- SCO's products are based on a UNIX System and support the full range of Intel and RISC processors.

SCO offers three categories of products:

© INPUT 1996 Reproduction prohibited.

- Platform products—OpenServer, UnixWare, Unix Source
- Layered server products—middleware and Internet
- Client integration products—SCO Vision family

SCO Platform Products

SCO's OpenServer systems are UNIX server operating systems for Intel processor-based platforms. They run multi-user, transaction-based DBMS and business applications, communications gateways, and mail and messaging servers in both host and client/server environments.

SCO OpenServer Release 5 provides advanced RAS, interoperability and scalability, distributed systems administration and maintenance, software deployment and management, support for Windows PCs and laptops, integration and migration of legacy software and hardware, and access to Internet services.

Key base operating systems in the OpenServer product family include:

- SCO OpenServer Enterprise System—A 32-bit, multiuser, multitasking X/Open UNIX system-compliant operating system with integrated graphics, multiprotocol networking, Internet services, mail and messaging services, and remote systems administration and software management
- SCO OpenServer Host System—A 32-bit, multiuser, multitasking X/Open UNIX system-compliant operating system with integrated graphics, simple PC connectivity, and mail and messaging services. It can be upgraded to the Enterprise system when client/server or networking capabilities are required.
- SCO UnixWare Application Server—A UNIX application server designed for seamless connectivity with NetWare networks.

SCO Desktop Products

- SCO OpenServer Desktop System—An integrated open, single-user operating system that delivers secure workstation capabilities and performance on Intel platforms
- SCO UnixWare Personal Edition—An open development platform to develop and administer line-of-business client/server applications or a UNIX workstation that offers seamless connectivity with Novell NetWare networks and services
- SCO CMW+—A secure Compartmentalized Workstation (CMW+) product that is based upon SCO Open Desktop 3.0 technology. It provides windowing, networking, and secure access to Microsoft Windows 3.1 applications (using Merge).

RAS and Scalability Services—SCO OpenServer includes RAS features such as filesystem journaling, uninterruptible power supply (UPS) support, SNMP with SMUX agents, instant reboot and fast filesystem recover, filesystem sizing, kernel reconfiguration, and on-line backup capabilities.

- SCO Virtual Disk Manager—A software extension to SCO OpenServer Release 5, providing software RAID 0,1,5 (mirroring and striping of user data) and SCO OpenServer systems in the event of hardware failure
- SCO SMP Licenses—License extensions to SCO OpenServer and SCO UnixWare systems

© INPUT 1996 Reproduction prohibited.

- SCO UnixWare Online Data Manager—An optional add-on package to SCO UnixWare 2, providing increased data availability via software RAID level 0,1,5,10, backup, restore, dynamic performance analysis, tuning, and defragmentation without taking the system off-line

Development Services—The SCO OpenServer Development System can be added, along with other development tools, in order to maintain applications across platforms, rightsize existing host-based applications, or take advantage of leading-edge technologies to develop new client/server applications.

- SCO OpenServer Development System—A software development system including a set of application programming interfaces, toolkits, debuggers, libraries, and utilities

- SCO UnixWare Software Developers' Toolkit (SDK)—An advanced software development environment for SCO UnixWare systems with a set of tools and application programming interfaces, including NetWare protocol support

- SCO POS Configuration Toolkit—A development tool that allows SCO UNIX and TCP/IP to be configured to run in as little as 1.2 MB of RAM and to support diskless PC configurations, and when used in conjunction with SCO Development System, create 32-bit, networked, client/server applications

Distributed Services—The SCO OpenServer system provides security for existing TCP/IP networks plus remote system administration and software management.

- SCO Distributed Services—A suite of products based on OSF DCE technology, including SCO Distributed Administration Services, SCO Security Services, SCO X.500 Directory Services, SCO DCE Executive, SCO DCE Cell Directory Services, and SCO DCE Development Kit

Windows Services—SCO Open Server includes TCP/IP, IPX/SPX, and POP network protocols, NetWare and LAN Manager gateway services, Wintif services, and Windows client backup and restore. Various add-on products are also available.

- SCO Merge—Loads copies of MS-DOS and Microsoft Windows 3.11, providing multiple SCO OpenServer users the ability to run MS-DOS and Microsoft Windows applications concurrently with other UNIX applications

- SCO Wabi—Emulates the Microsoft Windows interfaces and runs Windows applications only natively on SCO OpenServer

SCO Layered Server Products

SCO's layered server products are designed for extending the capabilities of the SCO OpenServer.

- SCO Advanced File and Printer Server—A complete network operating system extension to SCO OpenServer Release 5

 - SCO Advanced File and Printer Server is used to create a UNIX system-based network operating system that allows the file and printer access to PCs running Microsoft Windows 95, Windows NT, Windows for Workgroups, OS/2, DOS, and Windows.

- SCO Doctor—A systems management tool for SCO OpenServer Release 5.0 and Release 3 that provides performance monitoring, problem detection, alert notification, automatic problem correction, reliability management, and automatic

© INPUT 1996 Reproduction prohibited.

tuning for local, standalone SCO OpenServer systems or across a LAN/WAN/dial-up network

- SCO ARCserve/Open from Cheyenne—A data management system for enterprise networks

 - SCO ARCserve/Open provides automated data management to back up and restore data on servers, workstations, and desktop clients.

 - It provides multiplatform support, real-time statistics, disk grooming, tape media and device management, and disaster recovery facilities for the server.

SCO Internet Server Products—In April 1996, SCO announced the SCO Internet Server Family of products for Intel platforms:

- SCO Internet FastStart—The cornerstone server product of the SCO Internet Family includes a single-user version of SCO OpenServe Enterprise, multiline PPP, multihoming support, Netscape Navigator, and Netscape Communications Server. Also included are TCP/IP, IPX/SPX, NFS, NIS, DNS, PPP, SMTP, POP, and IMAP for networking, as well as network installation capability.

 FastStart also includes the SCO Doctor Lite for monitoring and systems management, the SCO ARCserve/OpenLite graphical backup system, and theSCO Advanced File and Print Server.

- Netscape Communications Server—A high-performance server software for SCO OpenServer and SCO UnixWare that enables hypermedia document publishing on the Internet's World Wide Web and on internal TCP/IP networks

- Netscape Commerce Server—A high-performance server software for SCO OpenServer and SCO UnixWare for conducting secure electronic commerce and communications on the Internet and other TCP/IP-based networks

- Netscape Proxy Server—A high-performance server software for workgroups that allows Web replication

- Netscape Navigator 2.0—A powerful point-and-click network Web browser that provides access to all major Internet resources with a single interface

- SCO Internet to NetWare Gateway—For use in conjunction with clients to provide NetWare IPX/SPX users transparent access to the Internet. The SCO Internet to NetWare Gateway translates IPX/SPX data from the NetWare network into TCP/IP data that can be understood on the Internet.

- SCO Internet Security Package—A GUI-driven configuration tool that provides a method for easy configuration, to tailor security needs

SCO Client Integration Products

The SCO Vision includes Windows-to-UNIX integration products. These products are available for all Windows platforms, including 3.1, NT, and Windows 95.

- SCO XVision Eclipse—A 32-bit PC X server for Microsoft Windows 95 and Windows NT, which resides on the UNIX server, enabling remote desktop management

- SCO SQL-Retriever 4—A 32-bit Open Database Connectivity (ODBC) middleware product for Windows 95 and Windows NT, providing access to all major UNIX SQL databases

© INPUT 1996 Reproduction prohibited.

- SCO VisionFS—An SMB (Server Message Block) server for UNIX systems using the existing networking components in Windows for Workgroups, Windows 95, and Windows NT, and providing file and print sharing capabilities from UNIX servers to Windows PCs

- SCO TermVision—A 32-bit terminal emulation package that displays UNIX character-based applications, files, and services in a Windows format

- SCO SuperVision—For remote management, configuration, and control of Windows desktops

- SCO Premier Motif—A complete service for Motif developers, including software and support. Premier Motif provides Motif libraries, OSF/Motif, and a portable development base.

Support Services

SCO's services support its wide range of customers, from small and medium-sized businesses to large enterprises, at both the end user and reseller levels.

- Education services include off-the-shelf courseware and instruction guides provided to end users and training provided through the 140 Authorized Education Centers worldwide. Advanced education is provided for advanced developers, and certification programs are available to train professionals in the support and administration of SCO systems. On-site training and custom programs are also available.

- Information services include a full range of on-line services, 24 hours a day, 7 days a week, including dial-up, Internet, and CD subscriptions. On-line support provides 14-hour access to fixes, supplements, and other information used by SCO engineers. The SCO support library is available on CD ROM or tape with E-mail updates of the SCO Online Support (SOS) System.

- Technical support services offer direct support 24 hours a day from SCO's Authorized Support Centers, as well as packages that range from an assigned SCO account coordinator with immediate access to product specialists to standard priority support with a maximum 8-hour response time.

- Professional services are offered for large organizations, with a range of services from custom engineering to multivendor systems integration. Packages range from high-priority access to an assigned SCO engineer to on-site consulting/engineering for systems integration, implementation, network design, and applications development. Special services are available for IHVs.

- Software services include product upgrades, support-level supplements, and extended feature supplements.

 Software enhancement services, combined with a support contract, deliver continuous maintenance, product enhancements and upgrades, and quarterly CD ROMs that include various guides.

Clients

Representative clients include the following:

Retail—Safeway, Michael's, Kmart, Walgreen's, KFC, Pizza Hut, McDonald's, Taco Bell, Southland (7-11), Kroeger, Billa Supermarkets, Halfords, Dixon Stores, Sears, Goodyear, Shoppers DrugMart, Rite-Aid, Nordstrom, and Sherwin-Williams

Finance and banking—Central Fidelity, NASDAQ Stock Exchange, Toronto Stock

© INPUT 1996 Reproduction prohibited.

Exchange, the New York Stock Exchange, Milan Stock Exchange, People's Bank of China, Commercial Bank China, Agricultural Bank China, Ulster Bank, Citicorp, Citibank, Chase Manhattan Bank, Goldman Sachs, Banamex, Banco do Brasil, Barclays, and National Westminster Bank

Government—Loral/ICS, the U.S. Army and Navy, NATO, the U.S. Department of Agriculture, the IRS, the British Ministry of Defense, and the U.K. Royal Air Force

Telecommunications—Northern Telecom, France Telecom, Telcom Argentine, U.S. West Telecom, and NYNEX Telecom

Others—AutoZone, Valvoline, Pep Boys, General Motors, Chinese Automobile Company, BMW, Ford Motor Europe, Nissan, EXXON, Ashland Oil, DHL de Mexico, Shell Oil, British Petroleum, Port Authority, Singapore, START (Germany), Dr. Pepper Bottling, and Chrysler

Marketing and Sales

SCO sells and supports its products and services through a worldwide network of more than 15,000 SCO Authorized Resellers and systems integrators, several hundred distributors, and 30 OEMs in more than 80 countries.

- SCO OpenServer is marketed primarily through distributors.
- SCO UnixWare is marketed through enterprise OEM partners such as ICL, NCR, Siemens, Olivetti, Unisys, Fujitsu, and Data General.

The SCO sales and distribution channels focus on three major customer groups:

- Small and medium-sized businesses—SCO works with VARs and authorized resellers that develop and/or sell products and services.
- Corporate customers—In the U.S. and for selected European customers, SCO has a major account team that builds and manages relationships with customers in target industries as well as with the company's channel partners who support these customers. In smaller markets, major distributors perform this role.

 SCO provides direct support to major corporate customers, OEMs market SCO solutions on their own hardware, systems integrators develop project-specific solutions, and VARs provide industry-specific, ready-to-use products.
- Government customers—In the U.S., SCO has a dedicated account team to manage accounts with government agencies. Outside the U.S., SCO uses regional management or OEMs, major distributors, or major resellers to manage government accounts.

 SCO also works with federal systems integrators who integrate products from various vendors and provide support services for complete projects.

Alliances

A sampling of recent alliances includes:

- In June 1996, SCO entered into a joint development agreement with Data General, ICL, and HAL to integrate enterprise-class NUMA clustering technology into SCO UnixWare. This project supports the company's strategy to make SCO UnixWare the standard UNIX operating system for volume enterprise servers.
- In April 1996, SCO, Intel, and seven major computer manufacturers announced

© INPUT 1996 Reproduction prohibited.

intentions to work together to establish SCO UnixWare as the industry-standard UNIX operating system for volume enterprise servers on Intel microprocessors.

- In February 1996, SCO and Hewlett-Packard detailed the companies' joint strategy and plans to deliver the next-generation, 64-bit UNIX operating system technologies (Code-name SDA).

- In February 1996, SCO developed strategic alliances with NETCOM, Morning Star Technologies, Netscape, and Micro Computer Systems in support of SCO's Internet server project. The products covered under the following alliances are to be ported to SCO's OpenServer and UnixWare platforms.

 - Under the terms of the marketing agreement with NETCOM, NETCOM is to provide SCO customers with high-speed, dedicated connections such as T1 (1.54 Mbps) and 56 Kbps, and dial-up ISDN and 28.8 Kbps connectivity.

 - SCO's licensing agreement with Morning Star Technologies provides for Morning Star's PPP technologies to be included in SCO's new Internet family of products, providing necessary security features.

 - Through an OEM reseller agreement, SCO agreed to license Netscape products, including the Netscape Commerce Server, Netscape Communications Server, Netscape Proxy Server, and the Netscape Navigator software.

 - Under SCO's licensing agreement with Micro Computer Systems, SCO will also use Micro Computer Systems' IPX/SPX gateway.

- In an effort to providing true open system products, SCO works with standards organizations such as X/Open and the Open Software Foundation to assure continued conformance to open system standards.

 In August 1995, SCO announced its new telecom strategy to provide an open, standards-based operating system to replace proprietary operating systems running PBX systems, and to integrate those PBX systems into networked computer telephony systems.

Currently, the company has strategic technology alliances for SCO UnixWare and SCO OpenServer with various third parties, including Cheyenne Software, Inc. of Roslyn Heights (NY), Mainsoft Corp. of Sunnyvale (CA), and Go Ahead Software of Seattle (WA).

Competition

SCO faces direct competition from the following competitors:

Operating systems— Microsoft NT and Sun Microsystems Solaris

UNIX system OEMs—NCR, Digital Equipment Corporation, Hewlett-Packard, IBM, Olivetti, Sun Microsystems, and Unisys

Multiprocessor servers—IBM's AS/400, Digital Equipment Corporation's Alpha-based servers, and Sequent servers

Systems based on microprocessors other than Intel—Digital Equipment Corporation, Hewlett-Packard, IBM, and Sun Microsystems

Assessment

SCO's strengths include:

- Owner of UNIX technologies and intellectual property

© INPUT 1996 Reproduction prohibited.

- Experienced in channels of distribution
- Strong alliances and OEM partnerships
- Wide range of application software

Challenges facing the company in the coming year include:

- Attracting and retaining qualified technical, managerial, and marketing personnel
- Training sales personnel and partners on a continually increasing range of products
- Staying at the forefront of innovation
- Managing the demands and requirements of customers, third-party partners, and the market

© INPUT 1996. Reproduction prohibited.

SCS/COMPUTE, INC.
12444 Powerscourt Drive
Suite 400
St. Louis, MO 63131
(314) 966-1040

Robert W. Nolan, Chairman & CEO
Thomas L. MacDonald, President & COO
Public Corporation, NASDAQ
Total Employees: 353 (Full-time)
Total Revenue, Fiscal Year End
1/31/92: $36,687,569

The Company

SCS/Compute, Inc. provides microcomputer-based tax and accounting applications software products and individual and business income tax return processing services to approximately 12,000 firms of certified public accountants and other tax professionals.

- SCS/Compute was incorporated in Missouri in 1981 to purchase certain assets of Comshare Tax Services, Inc., a Comshare subsidiary. The predecessor of Comshare Tax Services was Systematic Computer Systems, Inc., a corporation formed in 1972 by Robert W. Nolan and James W. Andrews.

- SCS/Compute was reincorporated in Delaware during 1986. In September 1986, SCS/Compute sold 700,000 shares of common stock in an initial public offering. Net proceeds of approximately $5.5 million were used to reduce various loans, for acquisition purposes, temporarily invested, or added to working capital.

SCS/Compute's long-term strategy is to respond to the changing computerized tax calculation industry. Increased interest in microcomputers for in-house control of the entire tax calculation process has driven the recent, rapid growth of in-house tax software.

- In response to this new interest, SCS/Compute marketed its first software package in 1985 and expanded its software offerings with the acquisition of Accountants Microsystems Incorporated (AMI) in 1988. Over the coming years, tax software and services, which presently account for 58% of total revenues, are expected to become the predominant revenue source of the company.

- In April 1992, SCS/Compute adopted a plan to restructure its tax processing facilities. This plan includes the closure of certain processing centers beginning in June 1992. A one-time

Copyright 1992 by INPUT. Reproduction Prohibited.

restructuring charge of $600,000 was recorded in the quarter ending April 30, 1992, reflecting the costs associated with the plan.

During 1990, SCS/Compute changed its fiscal year end to January 31 from April 30. The action acknowledged the shift in business mix towards tax software, which has experienced recent rapid revenue and earnings growth, from tax processing, which until recently has been the principal source of revenues and earnings.

SCS/Compute's fiscal 1992 revenue was $36.7 million, a 7% decrease from fiscal 1991 revenue of $39.4 million. Net income rose 22%, from $1.0 million in fiscal 1991 to $1.2 million in fiscal 1992. In the five-year summary that follows, results prior to fiscal 1991 have been restated to reflect the change in year-end date from April 30 to January 31.

SCS/COMPUTE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	1/92	1/91	1/90	1/89	1/88
Revenue	$36.7	$39.4	$35.7	$30.3	$22.9
· Percent increase (decrease) from previous year	(7%)	10%	18%	32%	45%
Income before taxes	$2.1	$1.7	$1.6	$0.8	$4.3
· Percent increase (decrease) from previous year	20%	6%	100%	(81%)	169%
Net income	$1.2	$1.0	$0.9	$(0.3)	$3.2
· Percent increase (decrease) from previous year	20%	12%	400%	(109%)	300%
Earnings (loss) per share	$0.47	$0.38	$0.29	$(0.10)	$1.05
· Percent increase (decrease) from previous year	24%	31%	390%	(110%)	239%

Revenue declines were attributed to the anticipated decline in tax processing revenues.

- SCS/Compute management anticipates that total revenue over the next several years will remain relatively flat as higher sales of tax software compensate for declines in tax processing.

Copyright 1992 by INPUT. Reproduction Prohibited.

Revenue for the three months ending April 30, 1992 was $7.9 million a 39% decrease from $12.8 million for the same period in 1991. Net losses were over $2.1 million, compared to net income of $1.5 million for the same period a year ago.

- Revenue declines were attributed to a 46% drop in tax processing revenues.
- Net losses were attributed to $900,000 in one-time charges, which included approximately $600,000 in restructuring charges related to the tax processing business and a $300,000 loss from a test of retail electronic tax return filing joint venture.

As of March 31, 1992, SCS/Compute had 353 regular full-time employees and had as many as 589 temporary employees in operations during the peak months of February, March, and April 1991. The company's full-time employees are segmented as follows:

Sales	72
Product development and systems	166
Operations	91
Accounting and administrative	18
Executive and administrative	6
	353

Competitors, by product line, include the following:

- Tax software: Lacerte, Chipsoft, and CCH Computax
- Accounting software: Prentice Hall Professional Software, CP-Aids, and Creative Solutions
- Tax processing: CCH Computax and Computer Language Research

Key Products and Services

Approximately 58% of SCS/Compute's fiscal 1992 revenue was derived from microcomputer-based tax and accounting software products and 42% from batch and on-line tax processing services.

A three-year source of revenue summary follows:

Copyright 1992 by INPUT. Reproduction Prohibited.

SCS/COMPUTE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1/92		1/91		1/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Processing services	$15.5	42%	$20.5	52%	$19.8	55%
Software products						
- Tax software	$17.7	48%	$14.8	38%	$11.3	32%
- Accounting software	3.5	10%	4.1	10%	4.6	13%
	$21.2	58%	$18.9	48%	$15.9	45%
TOTAL	**$36.7**	**100%**	**$39.4**	**100%**	**$35.7**	**100%**

Microcomputer Software Products:

SCS/Compute's tax software products allow the professional tax preparer to enter the taxpayer's data into a PC, which immediately calculates the results and presents its as it will appear on the tax forms. Once the preparer is satisfied with the results, the tax return can be printed on a laser printer, impact printer, pre-printed forms, or on form overlays.

- SCS/Compute maintains a range of forms and schedules for most federal, state, and local income tax returns required to be filed for individuals, partnerships, and businesses. The company also added federal fiduciary (1041) returns to its product offerings in 1991.

- Tax software products include the following:

 - The TAX MACHINE[R]/Business Tax Family of tax preparation systems are available for over 100 microcomputer systems in single or multiuser configurations and operate under most LANs, as well as under XENIX/UNIX operating systems.

 - Software tx, introduced in mid-1991, is designed to ease the transition from SCS/Compute tax processing to software. Input sheets and on-screen instructions are similar to those used in the SCS/Compute processing service.

Copyright 1992 by INPUT. Reproduction Prohibited.

- LMS Tax/LMS Business Tax products are designed for single-user, DOS-based systems, but are compatible with many LANs.

- Quick-Tax is used to calculate individual income tax returns only, and, as a lower-priced product, is targeted for the smaller practice catering to individuals. Quick-Tax EF has integrated electronic filing capabilities.

- Approximately 6,000 accounting firms used SCS/Compute tax return software during fiscal 1992, compared to 4,700 in fiscal 1991.

Accounting and business management software products for small business and public accounting firms include the following:

. Datawrite[R] is a client accounting, general ledger, and financial statement preparation software product. The Datawrite product family includes add-on modules for payroll processing, business ratio analysis, remote data entry, and file importation and exportation to and from other AMI products, as well as spreadsheets and word processing programs.

. Fixed Asset Management is a depreciation package that helps monitor and plan depreciation and disposition of capital assets.

· The Business Partner Series is a family of general business accounting software products. Modules include General Ledger, Payroll, Accounts Payable, Accounts Receivable, Fixed Asset Management, Sales Order Management, Inventory Control, and Purchase Orders.

Processing Services:

SCS/Compute provides individual (1040) and business (1065, 1120, and 1120S) income tax return processing services to firms of accountants and tax professionals. SCS/Compute offers the following tax processing services for individual and business returns:

· Batch, or "Remote Processing Service" customers complete SCS/Compute-designed input forms with tax data and deliver them to operations centers where they are reviewed, entered into the computer, processed, and laser printed. Completed tax forms are then delivered to the accountant for filing with federal and state authorities. Normal turnaround time is 48 hours.

· The key/LASER Processing Service, introduced in 1984, is an on-line telecommunications service for customers who wish to

Copyright 1992 by INPUT. Reproduction Prohibited.

use their microcomputers to access SCS/Compute's proprietary tax processing system. Customers enter tax data on their microcomputers, and transmit the data to an SCS/Compute data center, where the tax liability is calculated. Results are transmitted back to the customer for final approval. Returns can be printed on SCS/Compute's laser printers or in the customer's office using the key/LASER Printback option.

- The LMS Micro-Disk Processing Service allows customers to input tax return data into their PCs, calculate the tax return, and review the calculated return immediately. The customer may then either telecommunicate or deliver tax return data to SCS/Compute to process and print the final tax return.

Industry Markets

One hundred percent of SCS/Compute's revenue is derived from accountants and other tax professionals.

SCS/Compute's products and services are marketed nationwide through telesales, employee sales representatives, and independent (non-employee) sales representatives.

Geographic Markets

One hundred percent of SCS/Compute's fiscal 1992 revenue was derived from the U.S.

The company markets its software products and processing services in all 50 states, concentrating on local and regional accounting firms.

Operation Centers, which support SCS/Compute's processing services, are located in St. Louis, Bellevue (WA), Phoenix, Costa Mesa (CA), New York, Portland (OR), and Atlanta.

Additional offices are located in Burlingame, Pasadena, and San Francisco (CA); Denver (CO); New York (NY); Orlando and Tallahassee (FL); Crosset (AR); Springfield (MA); Charlotte (NC); and St. Paul (MN).

Computer Hardware

SCS/Compute has data processing centers in Atlanta and Phoenix, with IBM and Prime computers installed.

Operation Centers, which interface with SCS/Compute's data centers for processing, have three or four high-speed laser printers installed in support of batch printing of tax returns.

Copyright 1992 by INPUT. Reproduction Prohibited.

SCS/COMPUTE, INC.
12444 Powerscourt Drive
Suite 400
St. Louis, MO 63131
(314) 966-1040

Robert W. Nolan, Chairman & CEO
Thomas L. MacDonald, President & COO
Public Corporation, NASDAQ
Total Employees: 325 (Full-time)
Total Revenue, Fiscal Year End
1/31/91: $39,364,248

The Company

SCS/Compute, Inc. provides microcomputer-based tax and accounting application software products and individual and business income tax return processing services to approximately 12,000 firms of certified public accountants and other tax professionals.

- SCS/Compute was incorporated in Missouri in 1981 to purchase certain assets of Comshare Tax Services, Inc., a Comshare subsidiary. The predecessor of Comshare Tax Services was Systematic Computer Systems, Inc., a corporation formed in 1972 by Robert W. Nolan and James W. Andrews.

- SCS/Compute was reincorporated in Delaware during 1986. In September 1986, SCS/Compute sold 700,000 shares of common stock in an initial public offering. Net proceeds of approximately $5.5 million were used to reduce various loans, for acquisition purposes, temporarily invested, or added to working capital.

SCS/Compute's long-term strategy is to respond to the changing computerized tax calculation industry. Increased interest in microcomputers for in-house control of the entire tax calculation process has driven the recent, rapid growth of in-house tax software. In response to this new interest, SCS/Compute marketed its first software package in 1985 and expanded its software offerings with the acquisition of Accountants Microsystems Incorporated (AMI) in 1988. Over the coming years, tax software and services its expected to become the primary revenue source of the company.

During 1990, SCS/Compute changed its fiscal year end to January 31 from April 30. The action acknowledged the shift in business mix towards tax software, which has experienced recent rapid revenue and earnings growth, from tax processing, which until recently has been the principal source of revenues and earnings.

Copyright 1991 by INPUT. Reproduction Prohibited.

SCS/Compute's fiscal 1991 revenue reached $39.4 million, a 10% increase from fiscal 1990 revenue of $35.7 million. Net income rose 12%, from $875,000 in fiscal 1990, to $977,000 in fiscal 1991. In the five-year summary that follows, results prior to fiscal 1991 have been restated to reflect the change in year-end-date from April 30 to January 31.

SCS/COMPUTE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	1/91	1/90	1/89	1/88	1/87
Revenue	$39.4	$35.7	$30.3	$22.9	$15.8
. Percent increase from previous year	10%	18%	32%	45%	14%
Income before taxes	$1.7	$1.6	$0.8	$4.3	$1.6
· Percent increase (decrease) from previous year	6%	100%	(81%)	169%	113%
Net income	$1.0	$0.9	$(0.3)	$3.2	$0.8
· Percent increase (decrease) from previous year	12%	400%	(109%)	300%	36%
Earnings (loss) per share	$0.38	$0.29	$(0.10)	$1.05	$0.31
· Percent increase (decrease) from previous year	31%	390%	(110%)	239%	19%

Revenue growth over the past three years was attributed to the following:

. Approximately 80% of the increase in revenues over the period was due primarily to tax software and software services. Other accounting software sales have been relatively unchanged.

. Tax processing revenues accounted for approximately 20% of the increase in total revenues.

Revenue for the three months ending April 30, 1991 was $12.8 million, a 25% decrease from $17.1 million for the same period in 1990. Net income was $1.5 million, compared to $3.7 million for the same period a year ago.

. Revenue declines were attributed to the anticipated decline in tax processing revenues. SCS/Compute management anticipates

Copyright 1991 by INPUT. Reproduction Prohibited.

total revenue over the next several years will remain relatively flat as higher sales of tax software compensate for declines in tax processing.

. For fiscal 1992, SCS/Compute anticipates earnings per share in the range of $0.45 - $0.65, compared with $0.38 reported for fiscal 1991.

As of April 24, 1991, SCS/Compute had 325 regular full-time employees and had as many as 821 temporary employees in operations during the peak months of February, March, and April 1990. The company's full-time employees are segmented as follows:

Sales	72
Product development and systems	149
Operations	56
Accounting and administrative	40
Executive and administrative	8
	325

Competitors, by product line, include the following:

. Tax software: Lacerte, 1040 Solutions, and Arthur Andersen's A+Tax and Turbo Tax

. Accounting software: Prentice Hall Professional Software, Cp-Aids, and Creative Solutions

. Tax processing: CCH Computax and Computer Language Research

Key Products and Services

Approximately 52% of SCS/Compute's fiscal 1991 revenue was derived from batch and on-line tax processing services and 48% from microcomputer-based tax and accounting software products.

A three-year source of revenue summary follows:

Copyright 1991 by INPUT. Reproduction Prohibited.

SCS/COMPUTE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1/91		1/90		1/89	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Processing services	$20.5	52%	$19.8	55%	$18.5	61%
Software products						
- Tax software	$14.8	38%	$11.3	32%	$7.6	25%
- Accounting software	4.1	10%	4.6	13%	4.2	14%
	$18.9	48%	$15.9	45%	$11.8	39%
TOTAL	**$39.4**	**100%**	**$35.7**	**100%**	**$30.3**	**100%**

Microcomputer Software Products:

Tax software products for the professional tax preparer include the following:

- The TAX MACHINE[R]/Business Tax Family of tax preparation systems are available for over 100 microcomputer systems in single or multiuser configurations and operate under most LANs, as well as under XENIX/UNIX and SCO UNIX operating systems.
- LMS Tax/LMS Business Tax products are available for single user, DOS-based systems.
- QuickTax is used to calculate individual income tax returns only, and is designed for use on a single user, DOS configuration.
- Approximately 4,700 accounting firms used SCS/Compute tax return software during fiscal 1991, compared to 3,100 in fiscal 1989.

Accounting and business management software products for small business and public accounting firms include the following:

- Datawrite[R] is a client accounting, general ledger, and financial statement preparation software product. The DATAWRITE product family includes add-on modules for payroll processing, business ratio analysis, remote data entry, and file importation and exportation to and from other AMI products, as well as spreadsheets and word processing programs.

Copyright 1991 by INPUT. Reproduction Prohibited.

- Fixed Asset Management is a depreciation package that helps monitor and plan depreciation and disposition of capital assets.

- The Business Partner Series is a family of general business accounting software products. Modules include Information Courier, General Ledger, Payroll, Accounts Payable, Accounts Receivable, Fixed Asset Management, Sales Order Management, Inventory Control, Purchase Orders, Information Retrieval, and Business Analyzer.

Software tx, introduced in mid-1991, is designed to ease the transition from SCS/Compute tax processing to software. Software tx uses the already familary SCS input forms associated with the tax processing service.

Processing Services:

SCS/Compute provides individual (1040) and business (1065, 1120, and 1120S) income tax return processing services to firms of accountants and tax professionals.

SCS/Compute offers the following tax processing services for individual and business returns:

- Batch, or "Remote Processing Service", customers complete SCS/Compute-designed input forms with tax data, deliver them to operations centers where they are reviewed, entered into the computer, processed, and laser printed. Completed tax forms are then delivered to the accountant for filing with federal and state authorities. Normal turnaround time is 48 hours.

- The key/LASER Processing Service, introduced in 1984, is an on-line telecommunications service for customers who wish to use their microcomputers to access SCS/Compute's proprietary tax processing system. Customers enter tax data on their microcomputers, transmit the data to an SCS/Compute data center where the tax liability is calculated. Results are transmitted back to the customer for final approval. Returns can be printed on SCS/Compute's laser printers or in the customer's office using the key/LASER Printback option.

- The LMS Micro-Disk Processing Service allows customers to input tax return data into their PCs, calculate the tax return, and review the calculated return immediately. The customer may then either telecommunicate or deliver tax return data to SCS/Compute to process and print the final tax return.

Copyright 1991 by INPUT. Reproduction Prohibited.

Industry Markets

One hundred percent of SCS/Compute's revenue is derived from accountants and other tax professionals.

SCS/Compute's products and services are marketed nationwide through telesales, employee sales representatives, and independent (non-employee) sales representatives.

Geographic Markets

One hundred percent of SCS/Compute's fiscal 1991 revenue was derived from the U.S.

Remote processing and key LASER processing, LMS service and software products are marketed and serviced in 37 states. Tax Machine and accounting software is marketed in 50 states. QuickTax is currently available in 38 states.

Operation Centers, which support SCS/Compute's processing services, are located in St. Louis, Seattle, Phoenix, Costa Mesa (CA), New York, Portland (OR), and Atlanta.

Additional offices are located in Pasadena and Long Beach (CA), Denver, Chicago, New York, Crosset (AR), Dallas, St. Paul and Eden Prairie (MN), and Orlando and Tallahassee (FL).

Computer Hardware

SCS/Compute has data processing centers in Atlanta and Phoenix, with IBM and Prime computers installed.

Operation Centers, which interface with SCS/Compute's data centers for processing, have three or four high-speed laser printers installed in support of batch printing of tax returns.

Copyright 1991 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SCS/COMPUTE, INC.
1714 Deer Tracks Trail
St. Louis, MO 63131
(314) 966-1040

Robert W. Nolan, President
Public Corporation, OTC
Total Employees: 149 (7/1/86)
Total Revenue, Fiscal Year End 4/30/86: $15,262,000

THE COMPANY

- SCS/Compute, Inc. provides income tax return processing services and microcomputer tax software products to accountants and other tax professionals.
 - SCS/Compute was incorporated in Missouri in 1981 to purchase certain assets of Comshare Tax Services, Inc., a subsidiary of Comshare. SCS/Compute was reincorporated in Delaware during 1986.
 - The predecessor of Comshare Tax Services was Systematic Computer Systems, Inc., a corporation formed in 1972 by Robert W. Nolan and James W. Andrews.
- During September 1986 SCS/Compute made an initial public offering of one million shares of common stock, of which 700,000 shares were sold by the company and 300,000 shares were sold by selling stockholders. Net proceeds to the company of $5.5 million are being used to reduce bank debt and for working capital.
- Fiscal 1986 revenue reached $15.3 million, a 15% increase over fiscal 1985 revenue of $13.3 million. Net income rose 79%, from $730,000 in fiscal 1985 to $1.3 million in fiscal 1986. A five-year financial summary follows:

©1987 by INPUT. Reproduction Prohibited.

SCS/COMPUTE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	4/86	4/85	4/84	4/83	4/82
Revenue	$15,262	$13,261	$9,339	$6,874	$4,243
. Percent increase from previous year	15%	42%	36%	62%	N/A
Income before taxes	$ 1,945	$ 1,203	$1,581	$ 813	$ 190
. Percent increase (decrease) from previous year	62%	(24%)	95%	328%	N/A
Net income	$ 1,307	$ 730	$ 951	$ 553	$ 177
. Percent increase (decrease) from previous year	79%	(23%)	72%	212%	N/A
Earnings per share	$ 0.58	$ 0.32	$ 0.47	$ 0.29	$ 0.10
. Percent increase (decrease) from previous year	81%	(32%)	62%	190%	N/A

- SCS/Compute management attributes the company's growth over the past five years to acquisitions, an increased number of tax returns processed, geographic growth, price increases, and expanded service offerings.
 - Since 1982 SCS/Compute has acquired three income tax processing companies.
 - In February 1987, SCS/Compute acquired A&H Income Tax Centers, Inc. for an undisclosed amount of cash and stock.
 - A&H provides income tax processing services in the metropolitan New York City area.
 - A&H had annual revenue of approximately $1.2 million for its fiscal year ending June 30, 1986.
 - The operations of A&H are being merged into SCS/Compute.
 - In March 1984 SCS/Compute acquired Infoservices, Inc. for 166,706 shares of common stock (valued at $583,471) and $61,176 cash. Infoservices had annual revenue of approximately $1.4 million at the time of the acquisition. The acquisition was

©1987 by INPUT. Reproduction Prohibited.

accounted for as a purchase. The operations of Infoservices have been merged into SCS/Compute.

- In August 1982 SCS/Compute acquired 81.8% of the common stock of Independent Tax Corporation (ITC). The acquisition was accounted for as a purchase. ITC, with fiscal 1982 revenue of approximately $1.5 million, operated as a wholly owned subsidiary of SCS/Compute through fiscal 1986. SCS/Compute has subsequently increased its ownership in ITC to 86%. In August 1986 ITC was merged into SCS/Compute.

- Since fiscal 1982 SCS/Compute has increased the number of its full-service operations centers from two to six, including expansion in fiscal 1985 into the New York metropolitan area.

- Through 1983 SCS/Compute offered only batch processing services for individual tax returns. During 1984 the company introduced remote batch processing services and in 1985 began marketing partnership tax return processing services and microcomputer-based software for income tax return preparation.

- Research and development expenditures were approximately $1.9 million (12% of revenue) in fiscal 1986 and $1.5 million (12% of revenue) in fiscal 1985.

- SCS/Compute management states that due to the inherent seasonal nature of the company's business, most of the company's revenue is generated in its fiscal fourth quarter. Costs, however, are incurred throughout the entire fiscal year and SCS/Compute has historically experienced pretax losses in its first three quarters.

 - SCS/Compute management expects the company's fiscal 1987 revenue will exceed $17 million.

 - SCS/Compute management believes that there is an opportunity for the company to grow through acquisitions and intends to consider acquisitions of regional remote processing firms, microcomputer-based tax software companies, or other service/software companies.

- As of July 1, 1986, SCS/Compute had 149 permanent full-time employees, segmented as follows:

Sales	32
Operations	47
Product development and systems	44
Executive and administrative	16
Accounting	10
	149

©1987 by INPUT. Reproduction Prohibited.

- SCS/Compute also employed more than 720 temporary operations employees during the peak months of February, March, and April 1986.

- The company currently has 160 permanent full-time employees.

- Competitors include CCH Computax, Dynatax, and Computer Language Research, as well as local and regional tax return processing firms.

KEY PRODUCTS AND SERVICES

- Approximately 95% of SCS/Compute's fiscal 1986 revenue was derived from processing services and 1% from microcomputer software products. The remaining 4% of revenue was derived from miscellaneous software sales and data entry services.

- SCS/Compute provides income tax return processing services to approximately 3,000 firms of accountants and tax professionals. The company's computerized tax return processing services include calculation of the lowest possible tax and completion and printing of forms for filing with the Internal Revenue Service and 21 state tax authorities. The company markets its services in 25 states through sales staff located in 16 cities, concentrating its marketing efforts on local and regional accounting firms (usually certified public accountants).

- SCS/Compute has typically experienced a high degree of repeat business. Customers who provided 95% of the company's revenues in fiscal 1985 renewed their contracts for the next fiscal year. In fiscal 1986, the company processed over 460,000 tax returns.

- SCS/Compute offers three means by which customers may use its tax return processing service:

 - Remote Processing Service customers complete SCS/Compute-designed input forms with tax data, deliver them to operations centers where they are reviewed, entered into the computer system, processed, and laser printed. Completed tax forms are then delivered to the customer. This service represented 85% of fiscal 1986 revenue.

 - Key/LASER℠ Processing Service, introduced in 1984, is an on-line telecommunications service for customers who wish to use their personal computers as terminals on the company's proprietary tax processing system. Customers enter tax data on their personal computers, transmit the data to SCS/Compute's computers through the telecommunications software, review the calculated return on their personal computers, and when satisfied with the results, direct that the return be printed, collated, and shipped. This service represented 10% of fiscal 1986 revenue.

 - LMS℠ (Laser Micro Software) Service, a proprietary in-house, computerized tax program marketed in Arizona and California, allows

©1987 by INPUT. Reproduction Prohibited.

customers to input tax return data into IBM and compatible microcomputers. Using LMS, the computer calculates the tax return. The customer reviews the tax return and when satisfied with the final result, may print the tax return on a desktop laser printer in his own office or deliver his tax return diskette to SCS/Compute for final printing. Software sales represented approximately 1.5% of fiscal 1986 revenue.

- During fiscal 1987, SCS/Compute began marketing corporate tax return processing services in certain states in addition to its individual and partnership tax return services.

- SCS/Compute management believes that the company's remote processing service will experience moderate growth in existing markets. The company plans to generate additional growth in existing markets from sales of Key/LASER and LMS to new customers. The company has been able to expand its sales into new states as it has developed software systems for processing the returns of those states.

INDUSTRY MARKETS

- One hundred percent of SCS/Compute's revenue is derived from accountants and other tax professionals.

GEOGRAPHIC MARKETS

- One hundred percent of SCS/Compute's revenue is derived from the U.S.

- SCS/Compute currently processes tax returns for filing in 21 states and it is continuing to develop its software systems in order to process tax returns for filing in additional states. The company currently markets its LMS software package only in Arizona and California but intends to expand the number of markets in which it offers LMS in fiscal 1987 and thereafter.

- SCS/Compute markets its services through sales staff located in 16 cities. The company has regional sales offices in Los Angeles, Portland, St. Louis, Atlanta, and New York City.

COMPUTER HARDWARE AND SOFTWARE

- SCS/Compute has technical data centers in Phoenix and Atlanta with Magnuson computers installed.

©1987 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SDI
1700 South El Camino Real
P.O. Box 5801
San Mateo, CA 94402
(415) 572-1200

Victor Persico, President
Private Corporation
Total Employees: 75
Total Revenue, Fiscal Year End
9/30/85: $10 million*

THE COMPANY

- SDI, founded in 1968 as Software Design, Inc., designs, manufactures, markets, and services systems software products worldwide.

KEY PRODUCTS AND SERVICES

- One hundred percent of SDI's fiscal 1985 revenue was derived from the sale of systems software products and associated maintenance services.

- SDI system software products are designed for IBM 360, 370, 30XX, and 4300 series or compatible mainframes running under DOS, DOS/VS, DOS/VSE, VM/SP, or VM/370. Modular pricing is based on mainframe size. Products currently available include the following:

 - EPAT, introduced in 1972, is an automated tape library management system for DOS and DOS/VS(E) environments. The perpetual license fee for EPAT is $9,950. Lease plans are available from $229 per month.

 - REACH, introduced in 1978, is a disk space management system for DOS and DOS/VS(E) environments. The perpetual license fee for REACH is $7,050. Lease plans are available from $208 per month.

 - Instant-FBA, introduced in 1981, is a universal disk device simulator for DOS/VS(E) environments. The perpetual license fee for Instant-FBA is $12,500. Lease plans are available from $375 per month.

 - Universal File Portability (UFP), introduced in 1983, provides software portability for sequential files across a range of I/O devices. UFP is designed for DOS/VSE environments and has a perpetual license fee of $2,250. Lease plans are available from $90 per month.

 - VM MAGIC, introduced in 1984, is a universal disk simulator for VM environments. The perpetual license fee for VM MAGIC is $25,000. Lease plans are available from $375 per month.

*INPUT estimate

©1985 by INPUT. Reproduction Prohibited.

INDUSTRY MARKETS

- SDI's systems software products are marketed to clients across industry sectors.

GEOGRAPHIC MARKETS

- An estimated 60% of SDI's fiscal 1985 revenue was derived from the U.S. and 40% was international.
 - U.S. regional offices are located in San Francisco, Dallas, Englewood Cliffs (NJ), and Minneapolis.
 - An international office is located in The Netherlands, with marketing locations in Australia, Benelux, Canada, France, Germany, Great Britain, Italy, Scandinavia, and Switzerland.
 - Additional local representatives are provided in Finland, Ireland, South Africa, Spain, Yugoslavia, and South Korea.

COMPUTER HARDWARE AND SOFTWARE

- SDI maintains one IBM 4331 running under DOS/VSE, VM at its San Mateo data center.
- In its research and development center in London, SDI maintains the following equipment:
 - 1 IBM 4331, DOS/VSE, VM.
 - 1 IBM 370/185, DOS/VS.

©1985 by INPUT. Reproduction Prohibited.

SDI
1700 South El Camino Real
P.O. Box 5801
San Mateo, CA 94402
(415) 572-1200

Victor Persico, President
Private Corporation
Total Employees: 200*
Total Revenue, Fiscal Year End
9/30/83: $20,000,000

THE COMPANY

- SDI, founded in 1968 as Software Design, Inc., designs, manufactures, markets, and services systems software products worldwide.
- Fiscal 1983 revenue reached $20 million, an 8% increase over fiscal 1982 revenue of $18.5 million. Management stated that the company was profitable in 1983.
- SDI's 200 employees are segmented as follows:

Marketing/sales	70
Software services/customer support	70
Computer operations	30
General and administrative	30
	200

KEY PRODUCTS AND SERVICES

- One hundred percent of SDI's fiscal 1983 revenue was derived from the sale of systems software products.
- SDI systems software products are designed for IBM 360, 370, 30XX, and 4300 series or compatible mainframes running under DOS, DOS/VS, or DOS/VSE. Modular pricing is based on mainframe size. Products, available on a two-year lease/license basis only, include the following:
 - DOX is an operator-console support system providing improved system performance, operator productivity, control, and security for DOS and DOS/VS(E) installations. The system supports multiple enhanced operator consoles, an on-line system status display, user-defined operator command sequences and program function keys, dynamic routing of console messages, and spooling of console message traffic. Prices average $200 per month.
 - EPAT is a management, catalogue, control, and automatic volume recognition system for tape and tape libraries. Introduced in 1972,

*Company estimate

© 1984 by INPUT. Reproduction Prohibited.

EPAT is designed for DOS and DOS/VS(E) users, with pricing averaging $350 per month.

- Super-EPAT, introduced in 1983, is an enhanced version of EPAT for DOS and DOS/VS(E) installations.

- FASTTP, introduced in 1979, is a DOS and DOS/VS(E) performance tool designed to improve response time in the teleprocessing environment with little degradation to batch partitions. Prices average $200 per month.

- GRASP is a DOS resource management system introduced in 1968 with complete capabilities in the areas of spooling, accounting, operating system enhancements, and remote terminal support. Current prices average $400 per month.

- GRASPVS is a system for DOS/VS(E) users with facilities similar to those of GRASP. Prices average $500 per month.

- REACH is a modular, catalogue-driven disk space management and control system introduced in 1979 for the DOS and DOS/VS(E) operating environment. The system provides flexibility in operation and installation by centralizing file definitions and characteristics as opposed to having them interspersed throughout hundreds of job control statements. Current prices average $250 per month.

- INSTANT-FBA, introduced in mid-1981 for DOS/VS(E) users, eliminates program dependence on specific DASD device types, ending disk conversions and concerns with software portability by allowing any disk device type to simulate any other disk type.

 . Benefits of the system include the following:

 - Prolonged software life through elimination of program dependence on a specific DASD device type.

 - Disk space economy.

 - Existing programs can gain the performance advantage of faster disks.

 - Increased flexibility in selecting mainframe backup sites.

 - Increased programmer productivity.

 . Prices for the system average $480 per month.

- The Performance Management Subsystem (SDIPMS), introduced in 1970, monitors and improves DOS/VS(E) computer installation performance by accurately indicating existing and potential productivity

© 1984 by INPUT. Reproduction Prohibited.

bottlenecks. SDIPMS is priced at an average of $110 per month. The system gathers its own statistics and provides:

 - Comprehensive performance measurement information.
 - Complete job accounting.
 - Automatic user charge-back and billing facilities.
 - Dynamic partition balancing.
 - Resident transients.
 - A Logical Transient Area (LTA) accelerator.

- Universal File Portability (UFP), introduced in July 1983, provides DOS/VSE users with software portability for sequential files across a range of I/O devices, permitting flexible allocation and eliminating the restriction of device-dependence across classes of devices. Prices for UFP average $90 per month.

- UDC/VM, planned for introduction in May 1984, is a product with capabilities similar to INSTANT-FBA.

INDUSTRY MARKETS

- SDI revenue is fairly evenly divided across industry sectors.

GEOGRAPHIC MARKETS

- An estimated 60% of SDI's fiscal 1983 revenue was derived from the U.S. and 40% was international.

 - U.S. regional offices are located in San Francisco, Dallas, Englewood Cliffs (NJ), and Minneapolis.

 - An international office is located in The Netherlands, with marketing locations in Australia, Benelux, Canada, France, Germany, Great Britain, Italy, Scandinavia, and Switzerland.

 - Additional local representation is provided in Finland, Ireland, South Africa, Spain, Yugoslavia, and South Korea.

COMPUTER HARDWARE AND SOFTWARE

- SDI maintains one IBM 4331 running under VSE at its San Mateo data center.

 - In its research and development center in London, SDI maintains the following equipment:

 - 1 IBM 4331, VSE.
 - 1 IBM 370/135, DOS/VS.
 - 1 IBM 360/40, DOS.

© 1984 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SDI
1700 South El Camino Real
P.O. Box 5801
San Mateo, CA 94402
(415) 572-1200

Donald A. Carman, President
Private Corporation
Total Employees: 200 (Estimate)
Total Revenues, Fiscal Year End
9/30/80: $12-15 million*

PRINCIPAL BUSINESS SDI, founded in 1968 as Software Design, Inc., designs, manufactures and markets systems software products worldwide.

SOURCE OF REVENUE

- 100% Systems Software Products.

PRODUCTS AND SERVICES

- SDI systems software products are designed for IBM 360, 370, and 4300 series or compatible mainframes running under DOS, DOS/VS or DOS/VSE. Modular pricing is based on mainframe size. Products are available on a two-year lease/license basis only. Principal products include:

 - DOX: an operator-console support system for use in DOS and DOS/VS(E) installations. Prices average $300 per month.

 - EPAT: a tape library management and control system for DOS and DOS/VS(E) users. The average price is $335 per month.

 - FASTTP: a DOS and DOS/VS(E) performance tool designed to improve response time in the teleprocessing environment. Introduced in 1979, prices are available from the vendor on request.

 - FLEET/FLEET ONLINE: a DOS and DOS/VS(E) library maintenance, control and security system. FLEET ONLINE is available for IBM 3270 terminal users to perform source program maintenance on-line. The average price is $225 per month.

 - GRASP: a DOS resource management system first introduced in 1968. GRASP has complete capabilities in the areas of spooling, accounting, operating system enchancements and remote terminal support. Current prices average $400 per month.

 - GRASP/VS: a system for DOS/VS(E) users with facilities similar to those of GRASP. Prices average $500 per month.

* INPUT estimate

©1981 by INPUT. Reproduction Prohibited.

- REACH: a modular, catalogue-driven disk space management system introduced in 1979 for the DOS and DOS/VS(E) operating environment. Current prices average $350 per month.

INDUSTRY MARKETS SDI revenues are fairly evenly distributed across industry sectors.

GEOGRAPHIC MARKETS

- INPUT estimates that 60% of SDI's FY 1980 revenues were derived domestically and that 40% came from various international sources.

 - U.S. sales offices are located in Atlanta, Boston, Chicago, Cleveland, Dallas, Detroit, Englewood Cliffs, Kansas City, Los Angeles, Minneapolis, Philadelphia, San Francisco, Seattle and Washington, D.C.

 - International offices are located in Australia, Canada, France, Germany, Great Britain, Italy, The Netherlands, Sweden and Switzerland.

COMPUTER HARDWARE AND SOFTWARE

- SDI maintains one IBM 4331 running under VSE in its San Mateo data center.

 - In its research and development center in London, SDI maintains the following equipment:

 - 1 IBM 4331, VSE.
 - 1 IBM 370/135, DOS/VS.
 - 1 IBM 360/40, DOS.

©1981 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SDK MEDICAL COMPUTER SERVICES CORP.
850 Boylston St. (Route 9)
Chestnut Hill, MA 02167
(617) 232-8005

S. David Kaufman, President
Private
Total employees: 40
Total computer services revenues, fiscal year end 4/30/78: $2,300,000*

THE COMPANY

- SDK Medical Computer Services Corp. (SDK) was founded in 1961 when S. David Kaufman, a Certified Public Accountant and hospital comptroller, began providing automated hospital accounting services. This was after his 1959 feasibility study on managing hospitals through electronic data processing, conducted during a grant from the U.S. government. The company now provides health care processing for 60 hospitals, clinics, and health maintenance organizations.

- Fiscal 1978 revenues reached $2.3 million, a 15% increase over fiscal 1977 revenues of $2 million* Expansion will come from offering additional services to existing customers rather than through acquisition.

- SDK employees are distributed as follows:

-	Programming	7
-	Customer Service	6
-	Operations	23
-	Administration	4
		40

- Marketing is primarily performed by SDK. In New York, marketing is handled by Astradyne Computer Industries, Inc.

- Primary competition is from Shared Medical Systems and MCAUTO. SDK management claims SDK has the largest share of the health care processing market in Massachusetts. Expansion will come from existing customers.

KEY PRODUCTS AND SERVICES

- One hundred percent of SDK's fiscal 1978 revenues are generated by the sale of remote computing services as shown below:

Remote batch	95%
Interactive	5
	100%

*INPUT estimate

July 1978

© 1978 by INPUT, Menlo Park, CA 94025. Reproduction Prohibited.

- SDK offers comprehensive accounting, recordkeeping, and financial management information reporting services designed specifically for the health care industry. It provides processing to hospitals, clinics, and physicians groups.

- For hospitals, SDK offers processing modules, including:

 - SDK General Ledger Package: This package integrates the company's Accounts Receivable, Accounts Payable, and Payroll/Personnel modules to provide financial management for health care institutions.
 - SDK Accounts Receivable Package: The package uses the particular institution's reimbursement rates to calculate proration for principal health insurance plans. It generates third party bills and provides third party tape-to-tape service for faster billing. In addition, it provides monthly income analysis reports and a daily census utilization report.
 - SDK Accounts Payable Package: This service provides reports of current and future cash requirements by vendor and also generates checks and check registers.
 - SDK Payroll/Personnel Package: This system includes a centrally maintained employee master file which allows for several user specific data fields. SDK claims the master file offers features for:
 . Timely, accurate reports such as those required for EEO personnel and the new Pension Reform Act.
 . Federal accounting, such as W-2 forms.
 . Automatic accrual for monthly labor distribution report.

- SDK has developed accounting systems for both family and member-oriented medical clinics.

- SDK's newest services address the special accounting and recordkeeping problems in the area of physicians group practices.

APPLICATIONS One hundred percent of SDK's revenues are derived from specialty processing services.

INDUSTRY MARKET One hundred percent of SDK revenues are derived from 60 users in the medical and hospital industry as shown below:

Hospitals	85%
Health care clinics (physicians group practices)	10
HMOs (family and individual member-oriented ambulatory health centers)	5
	100%

© 1978 by INPUT, Menlo Park, CA 94025. Reproduction Prohibited.

COMPANY HIGHLIGHT/SDK MEDICAL COMPUTER SERVICES CORP.

GEOGRAPHIC MARKETS SDK's customers are located in New York, Connecticut, and Massacusetts.

COMPUTER HARDWARE AND SOFTWARE SDK utilizes two Honeywell 3200s for its remote batch computing services. It has two Data General mainframes for interactive computing.

© 1978 by INPUT, Menlo Park, CA 94025. Reproduction Prohibited.

IT2000

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1994

SEI Corporation

Chairman & CEO: Alfred P. West, Jr.
President & COO: Henry H. Greer
680 East Swedesford Road
Wayne, PA 19087-1658
Phone: (610) 254-1000
Fax: (610) 254-1105

Status:	Public
Employees:	1,254 (12/93)
Revenue:	$ 247,170,000
Fiscal Year End:	12/31/93

Key Points

- SEI Corporation supplies a range of information and financial advisory, consulting and management services to bank trust departments, plan sponsors and investment managers.
- 1993 revenues reached $247.2 million, with Trust and Banking contributing $177.7 million and Funds Sponsor/ Investment Advisory, $69.5 million.
- In 1993, SEI created a specialized Retail Unit that is designed to market SEI's mutual funds and new and existing retail asset management services through new distribution channels.
- In 1993, SEI expanded its Advisors' Inner Circle Fund offering by opening eight new portfolios totaling $300 million.

Company Description

SEI Corporation, founded in 1968, offers a variety of investment products and services to banks, fund sponsors and investment managers. The company currently serves approximately 2,400 clients.

© INPUT 1994 Reproduction prohibited.

Structure and operations

SEI, headquartered in Wayne (PA), has U.S. offices in Atlanta (GA), Cambridge (MA), Chicago (IL), Cleveland (OH), Dallas (TX), Houston (TX), New York (NY), San Francisco (CA) and Wilmington (DE). Other offices are in Halifax (Nova Scotia), Toronto (Ontario), Vancouver (British Columbia), Montreal (Quebec) and Zurich (Switzerland).

SEI has two principal wholly-owned subsidiaries that are investment advisors registered with the Securities and Exchange Commission (SEC), as follows:

- SEI Financial Services (SFS)
- SEI Financial Management Corporation (SFM)

Since 1991, SEI has organized its operations around the markets to which it delivers products and services—Trust and Banking and Fund Sponsor/Investment Advisory.

- The Trust and Banking market unit, through SFM, provides information processing and software services, distribution and administration of mutual funds and other financial products, recordkeeping services, performance measurement and consulting services to banks. It also provides custody and back-office support services to financial institutions.

 The Trust and Banking unit contributed approximately $177.7 million (72%) to SEI's total 1993 revenue. This unit comprises the former Information services and Financial services segments, plus the bank-related business formerly reported under Benefit services and Evaluation services.

- The Fund Sponsor/ Investment Advisory market unit, through SFS, provides performance measurement, consulting, recordkeeping services and investment solutions to plan sponsors and money managers, along with strategic asset planning services to pension plans and insurance companies.

 The Funds unit contributed about $69.5 million (28%) to SEI's 1993 revenue. This unit contains the former Evaluation services segment excluding the bank-related business and includes the fund sponsor-related business of Benefit services and two divisions of SFM that provide strategic asset planning services and management to pension plans and insurance companies.

- In 1993, SEI created a new unit called the Retail Unit to address needs of retail investors with SEI asset management solutions.

Company Strategy

The company is moving away from product-driven strategies to market-driven strategies, and has organized its operations to focus on needs of clients in each of the markets it serves. This approach allows clients in a particular market to access products and services through company employees who are familiar with all of the relevant products and services for that market.

SEI is investing in research and development to improve existing software products and develop new services for the financial industry.

© INPUT 1994. Reproduction prohibited.

Financials

Total 1993 revenue reached $247.2 million, a 14% increase over 1992 revenue of $215.9 million. Net income rose 25%, from $12.9 million in 1992 to $16.1 million in 1993. A five-year financial summary follows:

SEI Corporation
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	1993	1992(a)(b)	1991(a)(b)	1990(a)(b)	1989(a)(b)(c)
Revenue	$247.2	$215.9	$194.5	$173.1	$154.1
• Percent increase from previous year	14%	11%	12%	12%	13%
Income (loss) before taxes	$26.0	$18.3	$26.0	$20.7	$19.5
• Percent increase from previous year	42%	-	26%	6%	13%
Net income (loss)	$16.1	$12.9	$12.2	$12.1	$12.0
• Percent increase from previous year	25%	6%	1%	1%	-
Earnings (loss) per share (d)	$0.78	$0.59	$0.53	$0.54	$0.53
• Percent increase from previous year	32%	11%	-	2%	1%

(a) Revenues for 1992, 1991, 1990 and 1989 have been restated to reflect commission revenue on a gross basis.

(b) Information for 1992, 1991, 1990 and 1989 has been reported to reflect Reality Technologies, Ltd. separately as a discontinued operation.

(c) Information for 1989 includes the effect of the acquisition of National FSI, Inc., which was acquired in May 1989 for $18,587.

(d) Per share information for 1992, 1991, 1990 and 1989 has been restated to reflect the two-for-one stock split in 1993.

SEI attributes 1993 revenue results to the following:

- Trust and Banking revenues increased 14% to $177.7 million primarily due to aggressive cross-selling programs launched during 1993. During 1993, at least 56% of SEI's trust clients added new SEI services.
- Funds business grew 15% to $69.2 million due to increased asset management fees and brokerage fees.

Research and development expenditures (including capitalized software) were approximately $21.1 million (9% of revenue) in 1993, compared to $22.9 million (11% of revenue) in 1992, and $20.1 million (10% of revenue) in 1991.

Interim results: Revenue for the three months ending March 31, 1994 reached $63.7 million, a 10% increase over $57.7 million for the same period in 1993. Net income for the period rose 42%, from $3.1 million in 1992 to $4.4 million in 1993.

© INPUT 1994 Reproduction prohibited.

Market Financials

SEI markets its products and services to the banking and financial services industry.

Approximately 72% of SEI's 1993 revenue was derived from the trust accounting and management information services and 28% from investment performance services and investment products.

SEI's market for its trust accounting and management information services primarily consists of U.S. bank trust departments managing assets between $10 million and $100 billion.

Revenue Analysis by Product Line

A three-year summary of source of revenue by division follows:

SEI Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
Product/Service	1993		1992		1991	
	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Trust and Banking						
• Trust systems	$89.5	36%	$87.9	41%	$78.2	39%
• Financial services	66.9	27%	47.4	22%	39.1	20%
• Brokerage services	11.0	4%	8.8	4%	7.4	4%
• Consulting and evaluation services	4.8	2%	4.7	2%	5.1	3%
• Defined contribution services	5.5	3%	6.7	3%	8.0	4%
Fund Sponsor/Investment Advisory						
• Consulting and evaluation services	$33.7	14%	$36.3	17%	$38.2	20%
• Brokerage services	18.7	7%	13.4	6%	12.0	6%
• Asset management services	10.6	4%	4.4	2%	1.0	1%
• Defined contribution services	2.8	1%	4.5	2%	5.2	3%
• Financial services	3.7	2%	1.8	1%	0.3	0%
Total	$247.2	100%	$215.9	100%	$194.5	100%

The 14% increase in Trust and Banking revenues in 1993 was because of increased management fees due to the growth in average assets under management. Management fees increased 41% or $19.4 million in 1993, as compared to 1992. Average assets under management increased 58% from $23.3 billion during 1992 to approximately $36.7 billion during 1993.

The 15% increase in Fund Sponsor/ Investment Advisory revenues in 1993, as compared to 1992, was primarily due to increased asset management fees from the International Equity Fund and Customized Asset Management Service (CAMS) along with increased brokerage fees.

© INPUT 1994 Reproduction prohibited.

Geographic Markets

The majority of SEI's 1993 revenue was derived from the U.S. and Canada.

Offices are located in Wayne (PA), Atlanta (GA), Cambridge (MA), Chicago (IL), Cleveland (OH), Dallas (TX), Houston (TX), New York (NY), San Francisco (CA), Wilmington (DE), Halifax, Montreal, Vancouver, Toronto and Switzerland.

Employees

As of December 31, 1993, SEI had approximately 1,254 full-time employees.

Key Products and Services

Trust Accounting and Management Information Services

SEI's Trust and Banking unit provides trust accounting and management information services via its 3000 product line.

The 3000 product line offers a trust accounting and management information system that supports investment accounting, client administration, portfolio analysis, trade-order processing, centralized securities and financial information database, performance measurement and international and domestic securities processing.

The 3000 product line is made up of the following products:

- TRUST 3000® is an on-line trust accounting and management information system. The product features a securities movement and control program, directly linked to the Depository Trust Company that processes and tracks trades from trade date to settlement.

- Depository Link, an interface to the Depository Trust Company for securities clearance and settlement, automates trade input, confirmation/affirmation processing, income and maturities posting, settlement entries and activity and position reconciliation.

- Automated Cash Management provides an automatic daily sweep capability for all designated accounts.

- Automated GNMA Processing handles the special monthly processing requirements of GNMA, FHLMC and Graduated Payment Mortgage securities, including automatic factor updates, payment calculation, posting and reporting.

- Liquid Asset Management automates investment of excess cash into SEI money market mutual funds.

- CustodyLink provides an automated interface with various outside custody processing systems. This interface is integrated with SEI's TRUST 3000, Security Movement and Control and Depository Link Systems.

- ProxyLink automates distribution of corporate proxy and annual report materials to trust department clients through an interface with Independent Election Corporation of America.

- Employee Benefit Reporting (EBR) is a benefit plan accounting and master trust reporting system.

- Pension Payment and Payroll Processing automates the payroll functions of

© INPUT 1994. Reproduction prohibited.

employee benefit plans requiring periodic payments.

- Mineral Interest Accounting (MIA) meets the special accounting needs of mineral interest investments. including income processing, property reporting and exception reporting to highlight delinquent receivables. MIA provides automatic receipt of royalty payments, identification of unestablished leases and automatic payment posting.

- Automated preparation of 1041 tax returns is provided through an interface to CCH Computax, Inc. or FAST-TAX (Computer Language Research, Inc.)

- Cost and Profit Analysis helps identify accounts that require corrective action, highlights profitable products that can be expanded to provide even greater returns, provides the cost basis for establishing fee structures and pricing packages and provides information to justify special fees.

- The Relationship Banking System is an automated interface between the TRUST 3000 system and a bank's retail transaction processing along with demand deposit account systems for customized investment product offerings.

- InfoBuild is a PC-based data extract product that provides access to TRUST 3000 information to accommodate special reporting needs. The product can be used as a report writer or a gateway to any compatible PC spreadsheet or database management application.

- INVEST 3000® is integrated with TRUST 3000 and combines portfolio information with third-party research databases and analytical tools in support of investment management.

- TRADE 3000® is a trade-order processing system that tracks securities trades from the development stage of trade orders through execution and trade settlements.

- MarketLink is a securities trading system that automates trade order entry, trade execution and settlement posting through an interface with selected brokerage systems.

- SOURCE 3000® is a centralized securities and financial information database that uses third-party-provided pricing and other asset-related information.

- PERFORMANCE 3000® provides periodic reports that measure account performance, including rates of return and comparison with industry standard or customer-specific indices. Advanced performance reporting capabilities include rate of return and time period flexibility, segment combinations, management summary reporting, graphical displays and composite account reporting.

- Global TRUST 3000® is an integrated international and domestic securities processing product with multicurrency trust accounting capabilities.

As of December 31, 1993, SEI was providing processing or software services to 308 trust departments located in 48 states, the District of Columbia and Canada.

Investment Products and Services

SEI has created a number of investment products for institutional investors, through its subsidiaries, SFS and SFM. In 1993, SEI

© INPUT 1994 Reproduction prohibited.

began offering its Family of Funds on a retail basis through financial institutions and intermediaries.

The products include open-end management investment companies that offer multiple portfolios and classes within a portfolio and include:

- SEI Liquid Asset Trust—a money market fund
- SEI Tax Exempt Trust—tax-exempt money market and fixed income fund.
- SEI Cash+Plus Trust—money market and government bond portfolios.
- SEI Index Funds—indexed equity and fixed income funds.
- SEI Institutional Managed Trust—equity, bond and balanced portfolios.
- SEI International Trust—international equity and fixed income portfolios.

Services provided by SEI include:

- Administration services include back-office administrative, financial, legal/compliance and shareholder accounting services.
- Distribution services include marketing strategy and sales support.
- Asset allocation strategies and software and market assistance for banks.

As of December 31, 1993, SEI provided administration and distribution services to banks and credit unions with assets under management of approximately $19.6 billion.

As of December 31, 1993, the company had approximately 64 clients using its asset allocation program.

In 1993, SEI began offering ProVantage Funds to retail shareholders. As of December 31, 1993, the company had approximately 120 retail shareholders.

Investment Performance Services and Investment Products

SEI provides investment performance services and investment solutions to its benefit plan and money manager clients. Services include:

- International Equity Fund is a collective trust designed for plan sponsors who might be excluded from international investments because of high asset levels required for separate account management of international securities. At the end of 1993, the fund had an opening balance of $600 million.
- Customized Asset Management Service (CAMS) is a program for small to medium-sized benefit plans, hospitals and institutional investors. As of December 31, 1993, CAMS had 43 clients.
- The Advisors' Inner Circle Fund is designed for money managers to create their own proprietary mutual funds for smaller account business. As of December 31, 1993, eight money managers offered 14 portfolios with total assets of $650 million.
- The Lifetime Asset Management Fund (LAMP) is an asset management program that provides a fee-based business solution to financial intermediaries.

© INPUT 1994 Reproduction prohibited.

- Defined contribution retirement services business offers two principal software product lines:
 - ACCESS 3000 is the company's mainframe-based recordkeeping system with a PC front-end.
 - PAY 3000 is an on-line, real-time interactive system that processes recurring and lump-sum pension payments from defined contribution and defined benefit plans.
- Insurance Asset Services targeted to insurance companies, is an extension to the asset management and consulting services. As of December 31, 1993, there were 45 clients using these services.

Clients

SEI serves approximately 2,400 clients. Some of SEI's clients include One Valley Bank (OVB) of Charleston (WV), Florida State Board of Administration (FL), Fox Chase Cancer Center, and Magna Trust Company of St. Louis (MO).

Marketing and Sales

The company has 28 sales representatives in its Trust and Banking market unit and 55 sales representatives in its Fund Sponsor/Investment Advisory market unit.

Sales personnel operate from 13 offices located in Wayne (PA), San Francisco (CA), Chicago (IL), Cambridge (MA), New York (NY), Dallas (TX), Houston (TX), Atlanta (GA), Cleveland (OH), Toronto (Ontario), Montreal (Quebec), Vancouver (British Columbia) and Halifax (Nova Scotia).

Competition

SEI's major competitors in the trust accounting and processing services area include National Computer Systems, Inc. and Trust Services, Inc., a subsidiary of Broadway Seymour. Also, numerous financial institutions operate their own proprietary trust processing systems.

Principal competitors of the company's Family of Funds include Federated Investors, Inc., The Winsbury Company, Fidelity Management Corporation, Concord Holding Corporation, 440 Financial/Allmerica Institutional Services, Investors Fiduciary Trust Company and Goldman Sachs & Co., as well as individual bank proprietary and common funds.

The major competitors of SEI's consulting services are Mercer-Meidinger-Hansen, Callan Associates and Wilshire Associates.

The company's competitors in the defined contribution recordkeeping/asset management market include Fidelity Institutional Retirement Services Company, The Vanguard Group, Hewitt & Associates, Bankers Trust, Merrill Lynch and T. Rowe Price.

INPUT Assessment

SEI's strength lies in its breadth of product and service offerings for the banking and finance industries and its ability to cross-sell these products and services. No one competitor addresses the full range of products offered by SEI.

However, in the future, if banks are allowed to participate directly in the securities business, it could prove to be a threat to SEI.

© INPUT 1994 Reproduction prohibited.

SEI CORPORATION
680 East Swedesford Road
Wayne, PA 19087-1658
(215) 254-1290

Alfred P. West, Jr., Chairman and CEO
Henry H. Greer, President and COO
Public Corporation, NASDAQ
Total Employees: 1,226 (Full-time)
Total Revenue, Fiscal Year End 12/31/90: $171,916,000
Information Services Revenue: $83,900,000

The Company

SEI Corporation, founded in 1968, supplies a range of information and financial advisory, consulting, and management services to bank trust departments, plan sponsors, and investment managers. SEI currently services more than 2,300 clients throughout the U.S. and Canada.

SEI has recently restructured its internal organization to better serve its clients' needs. Information services, which contributed approximately $83.9 million to 1990 revenue, are currently provided by SEI through the following units:

- The Trust and Banking Market Unit, which incorporates the former Information Services and Benefit Services Divisions, provides processing, electronic information network services, systems operations (facilities management), software products, and associated professional services for portfolio analysis, investment accounting, employee benefits, and client administration. This unit has 773 employees.

- SEI has a majority interest in Reality Technologies, Ltd., which develops and distributes microcomputer-based software products for individual investors and financial services firms. SEI acquired its 62.5% interest in Reality for $2.1 million in November 1989.

Non-information services provided by SEI include:

- Management and distribution services for a range of investment products, including mutual funds and liquidity products

- Comparative investment performance evaluation and consulting services to tax-exempt fund sponsors and money managers

Copyright 1991 by INPUT. Reproduction Prohibited.

- Other services include investment advisory services to individuals (SEI Wealth Management, Inc.) and insurance companies (SEI Insurance Asset Services, Inc.).

SEI's total 1990 revenue reached $171.9 million, a 15% increase over 1989 revenue of $149.1 million. Net income was $12.1 million, the same as in 1989. A five-year financial summary follows:

SEI CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	1990	1989	1988	1987	1986
Revenue	$171.9	$149.1	$131.8	$122.7	$118.5
• Percent increase from previous year	15%	13%	8%	4%	13%
Income (loss) before taxes	$19.5	$19.1	$20.2	$15.2	$(10.5)
• Percent increase (decrease) from previous year	2%	(5%)	32%	244%	(276%)
• Gross margin	11%	13%	15%	13%	--
Net income (loss)	$12.1	$12.1	$13.2	$9.4	$(7.1)
• Percent increase (decrease) from previous year	--	(8%)	40%	233%	(286%)
• Net margin	7%	8%	10%	8%	--
Earnings (loss) per share	$1.08	$1.05	$1.04	$0.75	$(0.60)
• Percent increase (decrease) from previous year	3%	1%	39%	225%	(294%)

A three-year financial summary by operating division (prior to SEI's reorganization early this year) follows:

Copyright 1991 by INPUT. Reproduction Prohibited.

SEI CORPORATION
THREE-YEAR FINANCIAL SUMMARY BY DIVISION
($ millions)

	FISCAL YEAR					
	1990		1989		1988	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Revenue						
• Information Services	$67.9	40%	$59.3	40%	$56.4	43%
• Benefit Services (a)	16.0	9%	10.5	7%	--	--
• Financial Services	31.8	18%	30.2	20%	27.3	21%
• Evaluation Services	51.1	30%	48.7	33%	48.1	36%
• Other services	5.1	3%	0.4	--	--	--
TOTAL	$171.9	100%	$149.1	100%	$131.8	100%
Operating profit (loss)						
• Information Services	$14.3	45%	$9.0	29%	$5.7	19%
• Benefit Services (a)	(2.7)	(9%)	(0.7)	(2%)	--	--
• Financial Services	16.1	51%	17.4	55%	15.9	53%
• Evaluation Services	8.2	26%	8.9	28%	9.4	32%
• Other	(4.2)	(13%)	(3.3)	(10%)	(1.3)	(4%)
TOTAL	**$31.7**	**100%**	**$31.3**	**100%**	**$29.7**	**100%**

(a) Includes the results of National FSI from the date of its acquisition in May 1989.

The former Information Services Division's 1990 revenue increased 14% primarily due to the sale of new services to existing clients and increased processing and implementation revenues from new trust clients.

- The increases in margins are a direct result of the implementation and conversion of the last three years' record sales events, which added to an already profitable base of recurring business.

- As a result of leveraging existing resources within the segment, as well as productivity enhancements, 62% of the division's 1990 revenue increase resulted in operating income.

Results for the former Benefit Services Division, (which was established in May 1989 following the acquisition of National FSI) have been negatively affected due to a change in business emphasis away from equipment sales and one-time license fees to recurring revenue.

Copyright 1991 by INPUT. Reproduction Prohibited.

- National FSI's operations have now been integrated into the Trust and Banking Market Unit and a national sales force has been established. SEI will continue to concentrate on developing into a full-service provider for the defined contribution marketplace.

Major competitors of SEI in the trust systems segment include National Computer Systems, Inc. and Mellon Bank. In the participant recordkeeping segment, competitors include DYATRON Corporation (SunGard Data Systems), Fidelity Institutional Retirement Services Company, the Vanguard Group, Hewitt & Associates, and ACTI.

Key Products and Services

INPUT estimates 80% of SEI's information services revenue was derived from processing and systems operations services (including software licensing fees). The remainder was derived from professional services and software licensing for in-house use.

SEI's Trust and Banking Market Unit provides trust accounting and management information processing/network services, systems operations, and software products via its IBM-based 3000 product line. The primary market is U.S. bank trust departments managing assets of between $10 million and $100 billion.

- The majority of revenue is derived from payments made under long-term client contracts which have terms between three and five years.

- Software clients are charged monthly software service fees. Processing services and FM customers are charged monthly software service fees, as well as transaction-based processing fees.

SEI's IBM-based 3000 product line currently runs on IBM 370, 43XX, and 30XX series computers under MVS/XA and IBM 9370-based systems in a VM environment.

- The products are available as a transaction processing service (via access to a shared or partially dedicated SEI computer) or as a software product for in-house use. In any case, the user is linked through a proprietary network to SEI's data center, and through the data center to various external information sources.

- TRUST 3000^{R} is an on-line trust accounting and management information system. The product features a securities movement and control program, linked directly to the

Copyright 1991 by INPUT. Reproduction Prohibited.

Depository Trust Company, that processes and tracks trades from trade date to settlement.

- Depository Link, an interface to the Depository Trust Company for securities clearance and settlement, automates trade input, confirmation/affirmation processing, income and maturities posting, settlement entries, and activity and position reconciliation.

- Automated Cash Management provides an automatic daily sweep capability for all designated accounts.

- Automated GNMA Processing handles the special monthly processing requirements of GNMA, FHLMC, and Graduated Payment Mortgage securities, including automatic factor updates, payment calculation, posting, and reporting.

- Liquid Asset Management automates investment of excess cash into SEI money market mutual funds.

- CustodyLink provides an automated interface with various outside custody processing systems. This interface is integrated with SEI's TRUST 3000, Security Movement and Control, and Depository Link systems. Current custodians linked to the network include Bankers Trust Company, Marine Midland Bank, and The Bank of New York.

- ProxyLink automates distribution of corporate proxy and annual report materials to trust department clients through an interface with Independent Election Corporation of America.

- Employee Benefit Reporting (EBR) is a benefit plan accounting and master trust reporting system.

- Pension Payment and Payroll Processing automates the payroll functions of employee benefit plans requiring periodic payments.

- Mineral Interest Accounting (MIA) meets the special accounting needs of mineral interest investments, including income processing, property reporting, and exception reporting to highlight delinquent receivables. Through CHECKSTUB, an interface with the General Electric Data Exchange, MIA provides automatic receipt of royalty payments, identification of unestablished leases, and automatic payment posting.

Copyright 1991 by INPUT. Reproduction Prohibited.

 - Automated preparation of 1041 tax returns is provided through an interface to CCH Computax, Inc. or FAST-TAX (Computer Language Research, Inc.).

 - Cost and Profit Analysis helps identify accounts that require corrective action, highlights profitable products that can be expanded to provide even greater returns, provides the cost basis for establishing fee structures and pricing packages, and provides information to justify special fees.

 - The Relationship Banking System is an automated interface between the TRUST 3000 system and a bank's retail transaction processing and demand deposit account systems for customized investment product offerings.

- InfoBuild is a PC-based data extract product that provides access to TRUST 3000 information to accommodate special reporting needs. The product can be used as a report writer or as a gateway to any compatible PC spreadsheet or data base management application.

- Global TRUST 3000 provides multicurrency accounting and global securities processing capabilities to support an accurate cash basis statement with pending trades and accruals. The system offers local and base currency accounting and tracks gains/losses resulting from security appreciation and/or currency fluctuation.

- INVEST 3000^{R}, which is integrated with TRUST 3000, combines portfolio information with third-party research data bases and analytical tools in support of investment management.

- PERFORMANCE 3000^{R} provides periodic reports that measure account performance, including rates of return and comparison with industry standard or customer-specific indices. Advanced performance reporting capabilities include rate of return and time period flexibility, segment combinations, management summary reporting, graphic displays, and composite account reporting.

- TRADE 3000^{R} is a trade-order processing system that tracks securities trades from the development of trade orders through the resulting execution and trade settlement.

- MarketLink is a securities trading system that automates trade order entry, trade execution, and settlement posting through an interface with selected brokerage systems.

Copyright 1991 by INPUT. Reproduction Prohibited.

- SOURCE 3000[R] consolidates financial and securities pricing and other asset-related information from multiple information suppliers into a single data base covering over two million securities, including equities, municipal and corporate bonds, and collateralized mortgage obligations.

Customer support services provided by SEI include:

- Full conversion services, including custom programming and consulting.

- System installation, including loading of client data into SEI computers, client training and consulting, ongoing product maintenance, enhancements, and documentation.

 - SEI provides education and training at all levels for client personnel. Its Customer Training Center operates year-round, featuring both entry-level and advanced courses with hands-on computer training. Customized on-site training and consulting services are also available.

 - A 24-hour telephone support center handles system-oriented questions that may arise after installation.

 - SEI also furnishes single-source contacts for service on hardware, software, communications lines, and other peripheral equipment.

As of December 31, 1990, SEI had 270 contractual agreements to provide processing or software to trust departments located in 45 states, the District of Columbia, and Canada. SEI clients include 35 of the top 100 U.S. trust banking institutions.

SEI also offers product lines for use in the administration, recordkeeping, and investment management and analysis of pension, profit sharing, and other employee benefit plans. There are currently 212 clients.

- Marketing efforts are directed at bank trust departments that offer plan administration and recordkeeping services to their customers.

- The products are available on a batch service bureau basis where SEI processes the customer's information or as a remote on-line service where the customer accesses the systems through a dedicated or dial-up data communications network.

Copyright 1991 by INPUT. Reproduction Prohibited.

- Customers may also license the software for in-house use on their own IBM mainframe or Wang VS.

- The Employee Benefit Administration System (EBAS) is a participant recordkeeping system designed to automate all types of defined contribution employee benefit plans, including pension, thrift, profit sharing, ESOP, PAYSOP, Keogh, IRA, and 401(k) plans.

- The Pension and Lump Sum System (PLUS) is an on-line, real-time interactive system designed to process recurring and lump sum pension payments from defined contribution plans, in addition to producing checkwriting reports and participant and government tax form reporting. PLUS accommodates disbursements ranging in number from a few hundred to over 200,000 per month.

- The Participant Accounting System (PAS) is an on-line participant recordkeeping system that supports employee benefit plans using mutual or collective fund investment options that require daily pricing and updating. PAS allows for the allocation of contributions and dividends and the automation of withdrawals, forfeitures, and fund exchanges on-line and real-time.

- The Investment Performance System (IPS) is an investment performance measurement system designed to produce reports showing rates of return and other performance statistics for invested funds of pension and profit sharing trusts and any number of portfolios. IPS reports provide the growth of each fund in terms of cash flow, income, and appreciation returns.

- InfoTalk provides voice response access to employee benefit plan information via a touch-tone telephone.

- pcTRANS is an integrated PC-mainframe data exchange facility for access to the EBAS, PLUS, and PAS recordkeeping and payment systems.

Reality Technologies develops microcomputer-based software products for individual investors.

- WealthBuilder^{R} is a financial planning and investment advisory program currently marketed in conjunction with *Money* magazine.

- WealthStarter^{R} assists individuals in planning and budgeting for savings and investments.

Copyright 1991 by INPUT. Reproduction Prohibited.

- SEI plans to adapt the software for a wide range of individual investors.
- Reality is also assisting SEI to design microcomputer-based software for incorporation into its asset management services.

Industry Markets

Virtually 100% of SEI's 1990 information services revenue was derived from the banking and financial services industry.

SEI's market for its trust accounting and management information services consists primarily of U.S. bank trust departments managing assets between $10 million and $100 billion.

Geographic Markets

The majority of SEI's 1990 information services revenue was derived from the U.S. and the remainder from Canada.

Offices are located in Wayne (PA), Atlanta, Boston, Cambridge, Chicago, Cleveland, Dallas, Houston, Los Angeles, New York, San Francisco, Montreal, Toronto, Vancouver, and Halifax.

Computer Hardware and Software

SEI operates a data center in Wayne (PA) with the following equipment installed:

- 1 IBM 3084Q, MVS
- 1 IBM 3084QX, MVS
- 1 IBM 3081K, MVS
- 1 IBM 3090/400, MVS
- 1 IBM 9370, VM

The company also operates data centers in Dallas and Jersey City with IBM mainframes and Wang VS systems installed.

Copyright 1991 by INPUT. Reproduction Prohibited.

SEI CORPORATION
680 East Swedesford Road
Wayne, PA 19087-1658
(215) 254-1000

Alfred P. West, Jr., Chairman, President, and CEO
Public Corporation, NASDAQ
Total Employees: 1,223 (Full-time)
Total Revenue, Fiscal Year End 12/31/89: $149,143,000
Information Services Revenue: $69,800,000

The Company

SEI Corporation, founded in 1968, supplies a range of information and financial advisory, consulting, and management services to bank trust departments, plan sponsors, and investment managers. SEI currently services more than 2,300 clients throughout the U.S. and Canada.

Information services, which contributed approximately $69.8 million to 1989 revenue, are provided by SEI through the following units:

- The Information Services Division provides processing, electronic information network services, software products, and associated professional services for portfolio analysis, investment accounting, and client administration. This division has 452 employees.
- The Benefit Services Division provides administrative and processing services and application software for use by employee benefit plans. This segment, with 200 employees, was established in May 1989 with the acquisition of National FSI, Inc.
 - SEI purchased National FSI for $18.6 million.
 - National FSI, with approximately 200 employees at the time of the acquisition, had revenue of $19 million and net income of $600,000 for calendar 1988.
- SEI has a majority interest in Reality Technologies, Ltd., which develops and distributes microcomputer-based software products for individual investors and financial services firms. SEI acquired its 62.5% interest in Reality for $2.1 million in November 1989.

Copyright 1990 by INPUT. Reproduction Prohibited.

Non-information services are provided by SEI through the following units:

- The Financial Services Division provides management and distribution services for a range of investment products, including mutual funds and liquidity products. This division has 123 employees.

- The Evaluation Services Division provides comparative investment performance evaluation and consulting services to tax-exempt fund sponsors and money managers. This division has 338 employees.

- Other services include investment advisory services to individuals (SEI Wealth Management, Inc.) and insurance companies (SEI Insurance Asset Services, Inc.).

SEI's total 1989 revenue reached $149.1 million, a 13% increase over 1988 revenue of $131.8 million. Net income was $12.1 million, compared to $13.2 million in 1988. A five-year financial summary follows:

Copyright 1990 by INPUT. Reproduction Prohibited.

SEI CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR					
ITEM	1989	1988	1987	1986	1985	CAGR
Revenue	$149.1	$131.8	$122.7	$118.5	$104.8	9%
• Percent increase from previous year	13%	8%	4%	13%	13%	
Income (loss) before taxes	$19.1	$20.2	$15.2	$(10.5)	$6.0	30%
• Percent increase (decrease) from previous year	(5%)	32%	244%	(276%)	752%	
• Gross margin	13%	15%	13%	--	6%	
Net income (loss)	$12.1	$13.2	$9.4	$(7.1)	$3.8	34%
• Percent increase (decrease) from previous year	(8%)	40%	233%	(286%)	70%	
• Net margin	8%	10%	8%	--	4%	
Earnings (loss) per share	$1.05	$1.04	$0.75	$(0.60)	$0.31	36%
• Percent increase (decrease) from previous year	1%	39%	225%	(294%)	55%	

A three-year financial summary by operating division follows:

Copyright 1990 by INPUT. Reproduction Prohibited.

SEI CORPORATION
THREE-YEAR FINANCIAL SUMMARY BY DIVISION
($ millions)

	FISCAL YEAR					
	1989		1988		1987	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Revenue						
• Information Services	$59.3	40%	$56.4	43%	$52.3	44%
• Benefit Services (a)	10.5	7%	--	--	--	--
• Financial Services	30.2	20%	27.3	21%	24.0	20%
• Evaluation Services	48.7	33%	48.1	36%	45.2	36%
• Other services	0.4	--	--	--	--	--
TOTAL	**$149.1**	**100%**	**$131.8**	**100%**	**$121.5**	**100%**
Operating profit (loss)						
• Information Services	$9.0	29%	$5.7	19%	$(1.0)	(4%)
• Benefit Services (a)	(0.7)	(2%)	--	--	--	--
• Financial Services	17.4	55%	15.9	53%	16.5	65%
• Evaluation Services	8.9	28%	9.4	32%	10.2	41%
• Other	(3.3)	(10%)	(1.3)	(4%)	(0.5)	(2%)
TOTAL	**$31.3**	**100%**	**$29.7**	**100%**	**$25.2**	**100%**

(a) Includes the results of National FSI from the date of its acquisition in May 1989.

Information Services Division's 1989 revenue increased 5% primarily as a result of the sale of new services to existing clients and increased processing and implementation revenue from new trust clients.

- The division added 26 new bank clients and secured an additional 14 clients through bank mergers and acquisitions.

The Benefit Services Division recently announced an agreement with brokerage firm Charles Schwab & Company to provided administrative and recordkeeping services for Schwab's modular 401(k) plan offering to midsized companies.

Major competitors of SEI in the Information Services segment include National Computer Systems, Inc. and Mellon Fiduciary Services (a subsidiary of Mellon Bank). In the Benefit Services segment, competitors include DYATRON Corporation, Fidelity Institutional Retirement Services Company, the Vanguard Group, and Hewitt & Associates.

Copyright 1990 by INPUT. Reproduction Prohibited.

Key Products and Services

INPUT estimates over 80% of SEI's information services revenue was derived from processing services (including software licensing fees). The remainder was derived from professional services and software licensing for in-house use.

- An estimated 80% of the Information Services Division's 1989 revenue was derived from processing services.
- Approximately 52% of the Benefit Services Division's 1989 revenue was derived from software licenses for in-house use and 48% from software licenses and processing fees for service bureau and remote processing. On an annualized basis, the division's revenue was $16.3 million in 1989.
- Software sales from Reality Technologies was less than $100,000 for 1989.

Information Services Division:

SEI provides trust accounting and management information processing/network services and software products via its IBM-based 3000 product line. The primary market is U.S. bank trust departments managing assets of between $10 million and $100 billion.

- Approximately 90% of the division's 1989 revenue was derived from payments made under long-term client contracts which have terms between three and five years.
- Software clients are charged monthly software service fees. Processing services customers are charged monthly software service fees, as well as transaction-based processing fees.

SEI's IBM-based 3000 product line currently runs on IBM 370, 43XX, and 30XX series computers under MVS/TSO and IBM 9370-based systems in a VM environment.

- The products are available as a transaction processing service (via access to a shared or partially dedicated SEI computer) or as a software product for in-house use. In any case, the user is linked through a proprietary network to SEI's data center, and through the data center to various external information sources.
- TRUST 3000^{R} is an on-line trust accounting and management information system. The product features a securities movement and control program, linked directly to the Depository Trust Company, that processes and tracks trades from trade date to settlement.

Copyright 1990 by INPUT. Reproduction Prohibited.

- Depository Link, an interface to the Depository Trust Company for securities clearance and settlement, automates trade input, confirmation/affirmation processing, income and maturities posting, settlement entries, and activity and position reconciliation.

- Automated Cash Management provides an automatic daily sweep capability for all designated accounts.

- Automated GNMA Processing handles the special monthly processing requirements of GNMA, FHLMC, and Graduated Payment Mortgage securities, including automatic factor updates, payment calculation, posting, and reporting.

- Liquid Asset Management automates investment of excess cash into SEI money market mutual funds.

- CustodyLink (formery MarineLink) provides an automated interface with various outside custody processing systems. This interface is integrated with SEI's TRUST 3000, Security Movement and Control, and Depository Link systems. Current custodians linked to the network include Bankers Trust Company, Marine Midland Bank, and The Bank of New York.

- ProxyLink automates distribution of corporate proxy and annual report materials to trust department clients through an interface with Independent Election Corporation of America.

- Employee Benefit Reporting (EBR) is a benefit plan accounting and master trust reporting system.

- Pension Payment and Payroll Processing automates the payroll functions of employee benefit plans requiring periodic payments.

- Mineral Interest Accounting (MIA) meets the special accounting needs of mineral interest investments, including income processing, property reporting, and exception reporting to highlight delinquent receivables. Through CHECKSTUB, an interface with the General Electric Data Exchange, MIA provides automatic receipt of royalty payments, identification of unestablished leases, and automatic payment posting.

Copyright 1990 by INPUT. Reproduction Prohibited.

- Automated preparation of 1041 tax returns is provided through an interface to CCH Computax, Inc. or FAST-TAX (Computer Language Research, Inc.).

- Cost and Profit Analysis helps identifies accounts that require corrective action, highlights profitable products that can be expanded to provide even greater returns; provides the cost basis for establishing fee structures and pricing packages; and provides information to justify special fees.

- Performance Insight provides the information needed to monitor and evaluate investment performance by account and by manager.

- InfoBuild is a PC-based data extract product that provides access to TRUST 3000 information to accommodiate special reporting needs. The product can be used as a report writer or as a gateway to any compatible PC spreadsheet or data base management application.

- Global TRUST 3000 provides multicurrency accounting and global securities processing capabilities to support an accurate cash basis statement with pending trades and accruals. The system offers local and base currency accounting and tracks gains/losses reuslting from security appreciation and/or currency fluctuation.

- INVEST 3000^{R}, which is integrated with TRUST 3000, combines portfolio information with third-party research data bases and analytical tools in support of investment management.

- PERFORMANCE 3000^{R} provides periodic reports that measure account performance, including rates of return and comparison with industry standard, or customer-specific indices. Advanced performance reporting capabilities include rate of return and time period flexibility, segment combinations, management summary reporting, graphic displays, and composite account reporting.

- TRADE 3000^{R} is a trade-order processing system that tracks securities trades from the development of trade orders through the resulting execution and trade settlement.

- MarketLink is a securities trading system that automates trade order entry, trade execution, and settlement posting through an interface with selected brokerage systems.

Copyright 1990 by INPUT. Reproduction Prohibited.

- SOURCE 3000[R] consolidates financial and securities pricing and other asset-related information from multiple information suppliers into a single data base covering over two million securities, including equities, municipal and corporate bonds, and collateralized mortgage obligations.

Customer support services provided by SEI include:

- Full conversion services, including custom programming and consulting.

- System installation, including loading of client data into SEI computers, client training and consulting, ongoing product maintenance, enhancements, and documentation.

 - SEI provides education and training at all levels for client personnel. Its Customer Training Center operates year-round, featuring both entry level and advanced courses with hands-on computer training. Customized on-site training and consulting services are also available.

 - A 24-hour telephone support center handles system-oriented questions that may arise after installation.

 - SEI also furnishes single-source contacts for service on hardware, software, communications lines, and other peripheral equipment.

As of December 31, 1989, SEI had 271 contractual agreements to provide processing or software to trust departments located in 45 states, the District of Columbia, and Canada. The division's clients include 30 of the top 100 U.S. trust banking institutions.

Benefit Services:

The division offers four principal product lines for use in the administration, recordkeeping, and investment management and analysis of pension, profit sharing, and other employee benefit plans. There are currently over 240 clients.

- Marketing efforts are directed at corporations that require plan administration, and in addition, to bank trust departments, insurance companies, and consulting firms that offer plan administration and recordkeeping services to their customers.

- The products are available on a batch service bureau basis where SEI processes the customer's information or as a remote

Copyright 1990 by INPUT. Reproduction Prohibited.

on-line service where the customer accesses the systems through a dedicated or dial-up data communications network.

- Customers may also license the software for in-house use on their own IBM mainframe or Wang VS.

Benefit Services' products include the following:

- The Employee Benefit Administration System (EBAS) is a participant recordkeeping system designed to automate all types of defined contribution employee benefit plans, including pension, thrift, profit sharing, ESOP, PAYSOP, KEOGH, IRA, and 401(k) plans.

- The Pension and Lump Sum System (PLUS) is an on-line, real-time interactive system designed to process recurring and lump sum pension payments from defined contribution plans, in addition to producing checkwriting reports and participant and government tax form reporting. PLUS is used by corporations and institutions which pay a volume of disbursements ranging from a few hundred to over 200,000 disbursements per month.

- The Participant Accounting System (PAS) is an on-line participant recordkeeping system that supports employee benefit plans using mutual or collective fund investment options that require daily pricing and updating. PAS allows for the allocation of contributions and dividends and the automation of withdrawals, forfeitures, and fund exchanges on-line and real-time. PAS is marketed to major insurance companies and other corporations that desire daily plan processing.

- The Investment Performance System (IPS) is an investment performance measurement system designed to produce reports showing rates of return and other performance statistics for invested funds of pension and profit sharing trusts and any number of portfolios. IPS reports provide the growth of each fund in terms of cash flow, income, and appreciation returns.

Reality Technologies develops microcomputer-based software products for individual investors.

- WealthBuilder® is a financial planning and investment advisory program currently marketed in conjunction with *Money* magazine.

- SEI plans to adapt the software for a wide range of individual investors.

Copyright 1990 by INPUT. Reproduction Prohibited.

- Reality is also assisting SEI to design microcomputer-based software for incorporation into its asset management services.

Industry Markets

Virtually 100% of SEI's 1989 information services revenue was derived from the banking and financial services industry.

SEI's market for its trust accounting and management information services consists primarily of U.S. bank trust departments managing assets between $10 million and $100 billion.

The company's business segments share a common market and a number of the Information Services and Benefit Services clients are also clients of Financial Services or Evaluation Services. Consequently, following a client's decision to use the company's services, sales personnel continue to assist the client and to offer additional services and products.

Geographic Markets

The majority of SEI's 1989 information services revenue was derived from the U.S. and the remainder from Canada.

Offices are located in Wayne (PA), Atlanta, Boston, Cambridge, Chicago, Cleveland, Dallas, Houston, Los Angeles, New York, San Francisco, Montreal, Toronto, Vancouver, and Halifax.

- The Information Services Division is headquartered in Wayne.
- The Benefit Services Division is headquartered in Dallas and has sales representatives in major cities across the U.S.

Computer Hardware and Software

SEI's Information Services Division operates a data center in Wayne (PA) with the following equipment installed:

- 1 IBM 3084Q, MVS
- 1 IBM 3084QX, MVS
- 1 IBM 3081K, MVS
- 1 IBM 3090/400, MVS
- 1 IBM 9370, VM

The Benefit Services Division operates data centers in Dallas and Jersey City with IBM mainframes and Wang VS systems installed.

Copyright 1990 by INPUT. Reproduction Prohibited.

SEI CORPORATION
680 East Swedesford Road
Wayne, PA 19087-1658
(215) 254-1000

Alfred P. West, Jr., Chairman, President, and CEO
Public Corporation, OTC
Total Employees: 967 (Full-time)
Total Revenue, Fiscal Year End 12/31/87: $122,741,000
Information Services Revenue: $53,510,000

The Company

SEI Corporation, founded in 1968, supplies information, financial, and evaluation services to the financial industry.

- Information services provided by SEI include processing services, software products, and consulting professional services.
- Non-information services provided include the distribution and management of mutual funds for institutional investors and comparative investment performance evaluation and consulting services for investment managers and tax-exempt sponsors.
- SEI currently services more than 2,500 financial organizations throughout the U.S. and Canada.

SEI's total 1987 revenue reached $122.7 million, a 4% increase over 1986 revenue of $118.5 million. Net income reached $9.4 million, compared to net losses of $7.1 million in 1986. A five-year financial summary follows:

Copyright 1988 by INPUT. Reproduction Prohibited.

SEI CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	1987	1986	1985	1984	1983
Revenue	$122,741	$118,540	$104,769	$92,861	$68,618
• Percent increase from previous year	4%	13%	13%	35%	74%
Income (loss) before taxes	$15,231 (a)	$(10,544) (b)	$6,000	$704	$7,645
• Percent increase (decrease) from previous year	244%	(276%)	752%	(91%)	24%
Net income (loss)	$9,425	$(7,097)	$3,820	$2,246	$5,244
• Percent increase (decrease) from previous year	233%	(286%)	70%	(57%)	41%
Earnings (loss) per share (c)	$0.75	$(0.60)	$0.31	$0.20	$0.44
• Percent increase (decrease) from previous year	225%	(294%)	55%	(55%)	22%

(a) Includes fixed-asset write-offs of nearly $2 million relating primarily to the hardware environment (Prime) that will be abandoned in 1988 as the company completes migration of its remaining clients to the IBM-based TRUST 3000 accounting system.

(b) Includes a pretax charge of $11.9 million resulting from the company's decision to to eliminate its FUNDTRAC and Letter of Credit software product lines.

(c) Restated to reflect a 2-for-1 stock split effective June 22, 1987.

In January 1987, SEI announced the sale of its FUNDTRAC and Letter of Credit software product lines to Warrington Associates of Hopkins (MN) for approximately $4.5 million in cash.

- FUNDTRAC, a securities accounting and management system for treasury departments of banks and thrifts and investment departments of insurance companies, was purchased by SEI as part of the acquisition of TMI Systems Corporation in 1982.

- The FUNDTRAC and Letter of Credit systems contributed revenue of approximately $9.3 million, $11.8 million, and $10.6 million, for 1986, 1985, and 1984, respectively, and pretax losses from operations (before corporate overhead allocations) of $2.1 million, $368,000, and $928,000 for 1986, 1985, and 1984, respectively.

Copyright 1988 by INPUT. Reproduction Prohibited.

- The products were sold as a result of SEI management's determination that these businesses were no longer consistent with the company's strategic direction, which is focused on furnishing a combination of products and services to three related markets within the investment industry: bank trust departments, tax-exempt fund sponsors, and money managers.

SEI is organized into three operating divisions as follows:

- The Information Services Division provides processing and network (information-based) services, software products, and associated professional services for portfolio analysis, investment accounting, and client administration. This division has 416 employees.

- The Financial Services Division provides management and distribution services for a range of investment products, including mutual funds and liquidity products. This division has 93 employees.

- The Evaluation Services Division provides comparative investment performance evaluation and consulting services to tax-exempt fund sponsors and money managers. This division has 343 employees.

 - SEI entered this business segment when it acquired the Funds Evaluation Division of A.G. Becker Paribas, Inc. in late 1983.

 - These services were augmented in December 1985 with the acquisition of the software and data base previously used by Merrill Lynch, Pierce, Fenner & Smith, Inc. to provide investment performance and analysis products and services, and in October 1986 with the acquisition of certain assets of the Pensions Finance Associates Division of P.A.R.G. Public Affairs Resource Group Limited, which provides evaluation services in Canada.

Copyright 1988 by INPUT. Reproduction Prohibited.

A three-year financial summary by operating division follows:

SEI CORPORATION
THREE-YEAR FINANCIAL SUMMARY BY DIVISION
($ millions)

	FISCAL YEAR					
	1987		1986		1985	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Revenue						
• Information Services	$53.5	44%	$59.2	50%	$59.7	57%
• Financial Services	24.0	20%	18.9	16%	16.3	16%
• Evaluation Services	45.2	36%	40.4	34%	28.8	27%
TOTAL	**$122.7**	**100%**	**$118.5**	**100%**	**$104.8**	**100%**
Operating profit (loss)						
• Information Services	$(1.0)	(4%)	$(17.5)	*	$(0.4)	(2%)
• Financial Services	16.0	63%	13.8	*	12.1	72%
• Evaluation Services	10.3	41%	4.4	*	5.1	30%
TOTAL	**$25.2**	**100%**	**$0.7**	**100%**	**$16.8**	**100%**

* *Not meaningful.*

Excluding 1986 revenue from the FUNDTRAC and Letter of Credit businesses that were sold, Information Services revenues increased by $3.6 million, or 7%, in 1987. This division reduced costs throughout the year and, net of the fixed asset write-offs mentioned previously, would have made a positive contribution to profitability in 1987.

- This division reached a breakeven point in the second quarter of 1987 as a result of expense reductions and cutbacks in personnel connected with the migration of clients to the IBM trust accounting system.

- SEI's total net income increased during 1987 because of higher funds balances under management in the Financial Services Division, sales of additional services across all product lines to existing clients, sales to new clients, and productivity gains in the delivery of Evaluation Services products.

Revenue for the three months ending March 31, 1988 reached $33.3 million, an 11% increase over $29.9 million for the same period in 1987. Net income was $3.3 million, a 96% increase over

Copyright 1988 by INPUT. Reproduction Prohibited.

$1.7 million for the same period a yer ago. Growth in net income was attributed to a return to profitability in the Information Services Division of $781,000, compared to a loss of $654,000 in the same quarter last year.

Major competitors of SEI in the Information Services segment include National Computer Systems, Inc. and SunGard Data Systems, Inc.

Key Products and Services

Approximately 44% ($53.5 million) of SEI's 1987 revenue was derived from information services. The remaining 56% ($69.2 million) was derived from its two other operating divisions that provide money market fund distribution and management and comparative investment funds evaluation services.

INPUT estimates approximately 80% of SEI's 1987 information services revenue was derived from processing services, 15% from professional services, and 5% from application software product licenses.

SEI's trust accounting and management information systems include the following:

- TRUST 3000 is an on-line IBM mainframe-based trust accounting and management information system that supports portfolio analysis, investment accounting, trade order entry, and client administration.
 - TRUST 3000 currently runs on IBM 370, 43XX, and 30XX series computers under MVS/TSO and IBM 9370-based systems in a VM environment. TRUST 3000 is available as a remote computing service, as a software product for in-house use, or through facilities management. In any case, the user is linked through a proprietary network to SEI's data center, and through the data center to various external information sources.
 - Integrated subsystems of TRUST 3000 include the following:
 - Security Movement and Control (SMAC) is a trade-date system that controls the movement of securities from execution through settlement. It also controls the movement of securities resulting from re-registration or change of location. Other features include pending Common Trust Fund admissions and withdrawals, a same-day settlement capability, non-cash trades for

Copyright 1988 by INPUT. Reproduction Prohibited.

custody and safekeeping accounts, and pending trades integrated into portfolio reporting. SMAC also produces computer-generated vault documents, transmittal letters, customer trade advices, and broker settlement checks.

- TRADE 3000 is a trade order entry and processing system that tracks securities trades from the development of trade orders through the resulting execution and trade settlement.

- MarketLink is a securities trading system that automates trade order entry, trade execution, and settlement posting through an interface with selected brokerage systems. Features include on-line quotations and automatic verification.

- Automated Cash Management provides an automatic daily sweep capability for all designated accounts.

- Liquid Asset Management automates investment of excess cash into SEI money market mutual funds.

- Depository Link provides an interface to the Depository Trust Company for securities clearance and settlement. Depository Link automates trade input, confirmation/affirmation processing, income and maturities posting, settlement entries, and activity and position reconciliation.

- Marine Link is an automated interface with Marine Midland Bank's custody processing system. This interface is integrated with SEI's TRUST 3000, Security Movement and Control, and Depository Link systems.

- Employee Benefit Reporting (EBR) is a benefit plan accounting and reporting system. Reports include Form 5500-type summaries; schedules of acquisitions and dispositions; reporting by broker and issue; broker statement summaries; employee and employer contribution summaries; accrual schedules; and cost, cash, and market reconciliation.

- Performance Insight provides the information needed to monitor and evaluate investment performance by account and by manager. By using information directly from TRUST 3000, Performance Insight can extract asset position and transaction information to generated an evaluation report package.

Copyright 1988 by INPUT. Reproduction Prohibited.

- ProxyLink automates distribution of corporate proxy and annual report materials to trust department clients through an interface with Independent Election Corporation of America.

- Automated preparation of 1041 tax returns is provided through an interface to CCH Computax, Inc. or FAST-TAX (Computer Language Research, Inc.).

- Cost and Profit Analysis helps trust department profitability by identifying accounts that require corrective action, highlighting profitable products that can be expanded to provide even greater returns; providing the cost basis for establishing fee structures and pricing packages; and providing information to justify special fees.

- Automated GNMA Processing handles the special monthly processing requirements of GNMA, FHLMC, and Graduated Payment Mortgage securities, including automatic factor updates, payment calculation, posting, and reporting.

- Mineral Interest Accounting (MIA) meets the special accounting needs of mineral interst investments, including income processing, property reporting, and exception reporting to highlight delinquent receivables. Through CHECKSTUB, an interface with the General Electric Data Exchange, MIA provides automatic receipt of royalty payments, identification of unestablished leases, and automatic payment posting.

- Pension Payment and Payroll Processing automates the payroll functions of employee benefit plans requiring periodic payments.

- In addition to the interfaces described above, TRUST 3000 offers SOURCE 3000, a series of interfaces with various vendors that permits users to access centralized sources of securities and financial data.

 - Asset Source provides reporting and processing on a single screen. A "look up" capability accesses securities covered by the CUSIP directory. Asset information is then displayed in a single-line summary. The information can be viewed in detail and/or copied to the central asset data base.

Copyright 1988 by INPUT. Reproduction Prohibited.

- Bond Source combines Standard & Poor's Called Bond Record service with Kenny Information Systems' Notification Service to provide broader coverage of corporate and municipal bonds.

- Kenny Source is an automated interface with Kenny Information Systems that provides pricing information for all tax-exempt securities. The user determines the on-line pricing frequency.

- Merrill Source is an automated interface with Merrill Lynch's securities pricing service that provides pricing information for corporate and government bonds. Merrill Lynch updates most government, agency, and corporate debt instruments daily. The user determines the on-line pricing frequency.

- SEI can also customize interfaces between the TRUST 3000 system and existing bank systems.

- TRUST 3000 is fully integrated with SEI's INVEST 3000 system.

- INVEST 3000 is an integrated investment management system for decision support. Used in conjunction with TRUST 3000, INVEST 3000 combines portfolio information with third-party research data bases and analytical tools.

 - The original product (Portfolio Management System) and its developers were acquired in 1984 from Index Systems, Inc.

 - INVEST 3000 runs on IBM mainframes operating under MVS and is marketed to portfolio managers and investment personnel.

 - INVEST 3000 can be used to screen for investment opportunities, examine the impact of hypothetical trades, compare alternative investment strategies, and implement the strategies across all portfolios.

 - INVEST 3000 supports the development of model portfolios and the use of these models to evaluate real portfolios.

- TRUSTPAC/PC, introduced in 1984 is a trust accounting and management system marketed to community bank trust departments that typically manage less than $100 million in assets.

Copyright 1988 by INPUT. Reproduction Prohibited.

- The software runs on IBM PC, AT, or Compaq microcomputers with an external hard disk.

- TRUSTPAC/PC provides up-to-date statement and report generation on demand and maintains distinct taxlot records that enable identification of each account's acquisitions and dispositions. System features include dividend and interest income processing, tickler processing, automated cash management, audit processing, checkwriter processing, and fee processing.

• SEI's trust processing contracts with customers range from two to five years in length. Revenue from each customer depends on trust department size and equipment and services used.

Customer support services provided by SEI include:

• Full conversion services, including custom programming and consulting.

• System installation, including loading of client data into SEI computers, client training and consulting, ongoing product maintenance, enhancements, and documentation.

- SEI provides education and training at all levels for client personnel. Its Customer Training Center operates year-round, featuring both entry level and advanced courses with hands-on computer training. Customized on-site training and consulting services are also available.

- A 24-hour telephone support center handles system-oriented questions that may arise after installation.

- SEI also furnishes single-source contacts for service on hardware, software, communications lines, and other peripheral equipment.

Industry Markets

Virtually 100% of SEI's 1987 information services revenue was derived from the banking and financial services industry.

SEI's market for its trust accounting and management information services consists primarily of U.S. bank trust departments managing assets between $10 million and $7 billion.

• SEI's trust accounting information services market may be divided into three market segments according to the amount of

Copyright 1988 by INPUT. Reproduction Prohibited.

assets managed by the trust department: $500 million or more in managed assets; $100 million to $500 million in managed assets; and $10 million to $100 million in managed assets.

The company's business segments share a common market and a number of the Information Services clients are also clients of Financial Services or Evaluation Services. Consequently, following a client's decision to use the company's services, sales personnel continue to assist the client and to offer additional services and products.

Geographic Markets

Approximately 99% of SEI's 1987 information services revenue was derived from the U.S. and 1% from Canada.

SEI has U.S. offices in Atlanta, Cambridge, Chicago, Cleveland, Culver City (CA), Dallas, Houston, Los Angeles, New York City, Overland Park (KS), and San Francisco.

Foreign offices are located in London, Montreal, Toronto, and Vancouver.

Computer Hardware and Software

SEI operates a data center in Wayne (PA) with the following equipment installed:

- 1 IBM 3084Q, MVS.
- 1 IBM 3084QX, MVS.
- 1 IBM 3081K, MVS.
- 1 IBM 3090/400, MVS.
- 1 IBM 9370, VM.

Copyright 1988 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SEI CORPORATION
680 East Swedesford Road
Wayne, PA 19087
(215) 687-1700

Alfred P. West, Jr., Chairman and President
Public Corporation, OTC
Total Employees: 1,053
Total Revenue, Fiscal Year End 12/31/84: $93,703,000
Computer Services Revenue: $53,204,000

THE COMPANY

- SEI Corporation, founded in 1968, provides processing services, software products, professional consulting services, and financial products and information services to the banking and finance industry. Noncomputer services provided include the management and distribution of institutional investment products and investment performance evaluation and consulting services. SEI currently serves more than 2,000 financial organizations that manage over $600 billion in assets throughout the U.S. and Canada.

- SEI's primary strategy is to provide each of its markets a full range of products and services, integrated through its computer software and processing services.

 - The company is currently working toward delivering all its computer-based services in a common IBM environment. SEI management believes the move to IBM will remove minicomputer capacity restraints and allow compatibility with in-house IBM-based systems and external data bases.

 - SEI management also believes that lower processing costs associated with migrating to IBM technology will allow the company to become more competitive in its pricing structure.

- 1984 revenue reached $93.7 million, a 35% increase over 1983 revenue of $69.2 million. Net income was $2.2 million, a 57% decrease from 1983 net income of $5.2 million. A five-year financial summary follows:

©1985 by INPUT. Reproduction Prohibited.

SEI CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	$ 93,703	$ 69,239	$ 39,737	$ 32,667	$ 23,060
. Percent increase from previous year	35%	74%	22%	42%	27%
Income before taxes	$ 704	$ 7,645	$ 6,162	$ 4,617	$ 2,878
. Percent increase (decrease) from previous year	(91%)	24%	33%	60%	43%
Net income	$ 2,246(a)	$ 5,244	$ 3,728	$ 2,545	$ 1,546
. Percent increase (decrease) from previous year	(57%)	41%	46%	65%	40%
Earnings per share	$ 0.39	$ 0.89	$ 0.72	$ 0.53	$ 0.42
. Percent increase (decrease) from previous year	(56%)	24%	36%	26%	35%

(a) Includes a net benefit to income of $1,765,000 from the cumulative effect of changes in the method of accounting for investment tax credits from the deferred method to the flow-through method and from deferring and amortizing sales commissions over the initial life of the contract to expensing commissions when paid. Net income for 1984 before cumulative effect was $481,000.

- SEI management attributes declines in net income to the impact of developing an IBM trust system and converting trust clients from a Prime to an IBM environment. One-time license fees and equipment sales were de-emphasized.

- Acquisitions made by SEI during the past two years include the following:

 - In June 1984 SEI acquired the Financial Services Group of Index Systems, Inc., for approximately $4.3 million.

 . The Financial Services Group provides applications software products and consulting services to the financial services industry. Its operations have been merged into SEI's Computer Services business segment.

 . The acquisition was accounted for as a purchase.

©1985 by INPUT. Reproduction Prohibited.

- In October 1983 SEI acquired the Funds Evaluation Division of A. G. Becker Paribas, Incorporated for approximately $12.5 million. The acquisition was accounted for as a purchase.
 - The Funds Evaluation Division provides comparative investment performance evaluation and related consulting services.

- SEI revenue is generated from three business segments, as follows:
 - Computer Services revenue is generated from processing services, software products, and professional services provided to bank trust departments and treasury departments of banks and insurance companies.
 - Financial Services revenue is generated from the management and distribution of money market funds and automated delivery systems for SEI clients. These services are provided through SEI Financial Services Company, a wholly owned subsidiary formed in late 1981.
 - Information Services revenue is generated by providing comparative investment performance evaluation and consulting services to tax-exempt fund sponsors and institutional money managers. SEI entered this business segment when it acquired the Funds Evaluation Division of A. G. Becker Paribas, Inc. in late 1983.

- A two-year financial summary by operating segment follows:

SEI CORPORATION
TWO-YEAR FINANCIAL SUMMARY BY OPERATING SEGMENT
($ thousands)

	1984		1983	
	$ Amount	Percent of Total	$ Amount	Percent of Total
Revenue				
. Computer Services	$ 53,204	57%	$ 56,363	81%
. Financial Services	13,612	15	8,447	12
. Information Services (a)	26,887	28	4,429	6
Total	$ 93,703	100%	$ 69,239	100%
Operating Profit (loss)				
. Computer Services	$ (748)	(6%)	$ 8,109	59%
. Financial Services	7,374	61	3,456	25
. Information Services (a)	5,383	45	2,103	16
Total	$12,009	100%	$ 13,668	100%

(a) 1983 Information Services financials include the results of the operations of the Funds Evaluation Division of A. G. Becker Paribas from the date of acquisition on October 31, 1983.

©1985 by INPUT. Reproduction Prohibited.

- Computer Services revenue decreased in 1984 by 6% primarily as a result of a de-emphasis of one-time license fees and equipment sales.
 - One-time license fees and hardware sales were approximately $2.7 million in 1984 compared to $12.1 million in 1983. The reductions were partially offset by increases in monthly recurring revenue from trust processing services and revenue resulting from the acquisition of the Financial Services Group of Index Systems.
 - Operating losses in 1984 were attributed to costs associated with the development of an IBM-based trust product (which increased Computer Services expenses from 75% of revenue in 1983 to 86% of revenue in 1984) and the operation of two data centers to accommodate both Prime and IBM operations.
- Financial Services revenue increases parallel the growth in fund balances.
- Information Services revenue increases are due to the full-year results reported for 1984.

- Research and development costs were approximately $14.3 million (15% of revenue) in 1984, $9.3 million (13% of revenue) in 1983, and $4.8 million (12% of revenue) in 1982.

- Revenue for the nine months ending September 30, 1985 reached $78.9 million, a 13% increase over $70 million for the same period in 1984. Net income for the period reached $2.9 million compared to $4.2 million for the comparable period in 1984 which includes a $1.8 million net benefit to income from the cumulative effect of changes in the method of accounting described previously.

- As of December 31, 1984, SEI had 1,053 employees. The company currently has 1,102 employees segmented as follows:

Computer Services	740
Financial Services	97
Information Services	207
General and administrative	58
	1,102

- Major competitors of SEI in the Computer Services segment include Mellon Bank, National Computer Systems, Inc., and Key Financial Systems, Inc. for the TRUST-AID, TRUST-AID 3000, and TRUSTPAC products; and Warrington Associates, Real Time Systems, and Information Systems of America for the FUNDTRAC product.

©1985 by INPUT. Reproduction Prohibited.

KEY PRODUCTS AND SERVICES

- Approximately 57% ($53.2 million) of SEI's 1984 revenue was derived from computer services. The remaining 43% ($40.5 million) was derived from noncomputer services including the money market fund distribution and management and comparative investment fund evaluation services. A further breakdown of SEI's computer services revenue for 1984 and 1983 follows ($ millions):

	1984		1983	
	Revenue	Percent of Total	Revenue	Percent of Total
Processing services	$39.1	73%	$38.5	68%
Software products	6.9	13	12.1	22
Professional services	7.2	14	5.8	10
	$53.2	100%	$56.4	100%

- SEI's target markets for its computer services are as follows:
 - The market for trust accounting, reporting, and management information processing services and products consists primarily of 1,500 U.S. bank trust departments managing assets between $10 million and $7 billion. On December 31, 1984, SEI had agreements to provide processing services to more than 500 trust departments located in 47 states, the District of Columbia, and Canada.
 - The market for securities accounting and management processing services and products for banks, thrift institutions, and insurance companies consists primarily of the top 400 U.S. and Canadian banks and thrift institutions and the top 250 insurance companies in the U.S. and Canada. On December 31, 1984, SEI had 27 banks and thrifts and five insurance companies using these services.
 - The market for securities accounting and management processing services and products for professional money managers consists of the largest 1,500 professional money managers in the U.S. and Canada. On December 31, 1984, SEI had approximately 18 professional money manager clients.
- SEI's trust accounting and management products and services include the following:
 - In 1983 SEI announced TRUST-AID 3000, an on-line IBM mainframe-based trust accounting and management information system. TRUST-AID 3000 automates account management; securities processing and investment management; cash management; income collection; fee

©1985 by INPUT. Reproduction Prohibited.

processing; tax processing; demand note, common trust fund, and short-term investment fund accounting; remittance processing; and client reporting. TRUST-AID 3000 incorporates the functionality of SEI's minicomputer-based TRUST-AID system, originally introduced in 1972, with the capacity of an IBM mainframe. SEI will continue to support existing TRUST-AID clients until these clients are migrated to the TRUST-AID 3000 system.

- The software runs on IBM 370, 43XX, and 30XX series computers under MVS/TSO.

- TRUST-AID 3000 is available as a remote computing service or as a software product for in-house use. In either case, the user is linked through a proprietary network to SEI's data center, and through the data center to various external information sources.

- Integrated subsystems of TRUST-AID 3000 include the following:

 - Security Movement and Control (SMAC) allows the user to input trades on trade date, track them through final settlement, and deposit the values in the user's vault or at a custodian. Other features of SMAC include pending Common Trust Fund admissions and redemptions, a same-day settlement capability, noncash trades for custody and safekeeping accounts, and pending trades integrated into portfolio reporting. SMAC also produces computer-generated vault documents, transmittal letters, customer trade advices, and broker settlement checks.

 - Automated Cash Management provides an automatic daily sweep capability for all designated accounts.

 - Liquid Asset Management automates investment of excess cash into SEI money market mutual funds.

 - DepLink provides an interface to the Depository Trust Company for securities clearance and settlement. DepLink automates trade input and confirmation/affirmation processing, income and maturities posting, and settlement entries. Reports detail all activity and provide automated position reconciliation.

 - IDLink automates securities clearance and settlement through an interface to the Depository Trust Company (DTC). It is designed for use by banks that are not direct DTC participants.

 - Employee Benefit Reporting (EBR) is a benefit plan accounting and reporting program. Employee benefit

©1985 by INPUT. Reproduction Prohibited.

reports include Form 5500-type summaries, schedules of acquisitions and dispositions, reporting by broker and issue, broker statement summaries, employee contribution summaries, and market reconciliation. EBR provides entitlement date accounting, flexible reporting routines, on-line accounting analysis, and automatic report scheduling and routing.

- MarketLink is a securities trading system that automates order entry, trade execution, and settlement posting through an interface with the Pershing brokerage system. Features include on-line quotations and automatic verification.

- Performance Insight provides evaluation of trust investment performance compared to three populations and eight portfolio segments.

- ProxyLink automates distribution of corporate proxy and annual report materials to trust department clients, through an interface with Independent Election Corporation of America (IECA).

- Automated preparation of 1041 tax returns is provided through an interface to a professional tax preparation service, Fiduciary Special Services, Inc., or FAST-TAX.

- Cost and Profit Analysis helps improve trust department profitability by identifying unprofitable accounts that require corrective action; highlighting profitable products that can be expanded to provide even greater returns; providing the cost basis for establishing fee structures and pricing packages; and providing information to justify special fees.

- Automated GNMA Processing handles the special monthly processing requirements of GNMA, FHLMC, and Graduated Payment Mortgage securities, including automatic factor updates, payment calculation, posting, and reporting.

- Mineral Interest Accounting meets the special accounting needs of mineral interest investments, including income processing, complete property reporting, and exception reports to highlight delinquent receivables.

- Pension Payment and Payroll Processing automates the payroll functions of employee benefit plans requiring periodic payments.

©1985 by INPUT. Reproduction Prohibited.

- The Relationship Banking System enables banks to package financial products and services for target markets, producing a consolidated monthly statement. Supported bank products include enhanced Super NOW, enhanced trust, discount brokerage, money market funds, and a full asset management account.

. In addition to the interfaces described above (DepLink, MarketLink, IDLink, ProxyLink, and automated tax preparation), TRUST-AID 3000 interfaces to a securities pricing service--Interactive Data Services, Inc. (IDSI). Prices are provided for NYSE and AMEX equities and bonds, OTC stocks and bonds, options, municipal securities, dollar bonds, and U.S. government, agency, and savings bonds.

. SEI can also customize interfaces between the TRUST-AID system and existing bank systems.

. There are currently over 40 clients on the IBM-based TRUST-AID 3000 system. More than 300 existing TRUST-AID clients will migrate to the new system during 1985 and 1986.

. All TRUST-AID 3000 clients currently access the system on a remote computing basis. The first on-site installation is expected during 1986.

- TRUSTPAC/PC, introduced in 1984, is a trust accounting and management system marketed to community bank trust departments that typically manage less than $100 million in assets.

. The software operates on IBM microcomputers running under MS/DOS and ranges in price from $25,000 to $30,000.

. TRUSTPAC/PC offers up-to-date statement and report generation on demand and maintains distinct taxlot records that enable identification of each account's acquisitions and dispositions. System features include dividend and interest income processing, tickler processing, automated cash management, audit processing, checkwriter processing, and fee processing.

. TRUSTPAC, a predecessor product to TRUSTPAC/PC designed for Data General minicomputers, is no longer actively marketed. Existing clients are converting to the PC-based system.

. There are currently 55 TRUSTPAC/PC and TRUSTPAC clients.

- ERISA-AID is a comprehensive participant accounting, recordkeeping, and reporting system used by employee benefit trust management for defined-contribution employee benefit plans.

©1985 by INPUT. Reproduction Prohibited.

 - ERISA-AID is available as a remote computing service and as a software product. The system runs on Prime 50 Series computers.

 - ERISA-AID is designed to provide accounting for most defined contribution employee benefit plans, including profit-sharing, money purchase, thrift, savings, stock purchase, Individual Retirement Accounts, HR10 plans, and 401(k) plans.

 - For each plan, the ERISA-AID system stores more than 500 items of descriptive and financial information on the plan, each participant, and each account. Eligibility requirements, vesting schedules, allocation methods, transaction and suspension dates, and administrative information can all be tailored on a plan-by-plan basis to fit client needs.

 - The ERISA-AID system includes a report-writer that allows production of customized reports and participant statements.

 - ERISA-AID meets the regulatory reporting and disclosure requirements of the Employee Retirement Income Security Act (ERISA) and subsequent federal regulations. SEI updates the system whenever necessary to ensure continued compliance with the changing regulatory environment.

 - There are currently 60 ERISA-AID clients.

- SEI's trust processing contracts with customers range from two to five years in length. Revenue from each customer depends on trust department size and equipment and services used.

• SEI's securities/investment accounting and management products and services include the following:

- FUNDTRAC is an IBM-based on-line multicurrency securities accounting, management, and reporting system for banks and thrift institutions; insurance companies; and professional money managers, including investment advisors, brokers, dealers, large corporate treasury departments, and government agencies.

 - FUNDTRAC was acquired through the acquisition of TMI Systems Corporation in 1982 and is available as a remote computing service or as a software product.

 - The system runs on IBM 370, 43XX, 30XX, and compatible computers running under VM/CMS and MVS/TSO (1986).

 - Features include full-screen data entry, ad hoc inquiry, a single integrated data base, consolidated portfolio reporting, trade-date and settlement-date accounting, and automated interfaces to pricing sources and internal systems.

©1985 by INPUT. Reproduction Prohibited.

- Applications supported include dealer bank trading accountings, bank money desk operations, bank investment portfolios, corporate liquidity portfolios, insurance company portfolios, savings and loan association portfolios, bank safekeeping operations, pension and employee benefit funds, and corporate and bank foreign exchange trading operations.

- Other features include trading compliance monitoring, location accounting, automatic document generation, and refreshed display screens.

- Currently there are approximately 50 FUNDTRAC clients.

- The Portfolio Management System (PMS) is an on-line, conversational software system for portfolio managers and other investment personnel. PMS enables the manager to retrieve portfolio holdings and investment research information via a terminal and evaluate it with various analytical tools.

 - PMS and its developers were acquired in 1984 from Index Systems, Inc.

 - PMS runs on IBM mainframes operating under MVS.

 - PMS is marketed to portfolio managers and investment personnel.

 - Portfolio information functions enable users to review all portfolios in a structured fashion, or to review a single portfolio in depth. Use of these functions allows a manager to view frequently the structure of managed portfolios.

 - Investment research functions allow for comparative analysis of issues and in-depth analysis of single issues.

 - Command functions allow users to conduct "pro-forma" analyses of securities trades. The commands also support development of model portfolios and the use of these models to evaluate real portfolios.

 - There are currently five PMS installations.

 - In May 1985 SEI announced a multimillion dollar, five-year contract to provide PMS to Marine Midland Bank in combination with SEI's TRUST-AID 3000 system.

- Other SEI computer services-related products and services include the following:

©1985 by INPUT. Reproduction Prohibited.

- The Letter of Credit system, introduced in 1983, provides for the on-line automation of all commercial letter of credit products.

 - The system is available as a software product on IBM 43XX, 30XX, and compatible mainframes running under MVS.

 - The target market for the product is both regional banks and high-volume money center operations.

 - The system is designed to allow for data entry and inquiry at remote branch locations and customer sites via an IBM PC/XT, with final verification and approval at the central office.

 - The system facilitates on-line generation of letters of credit, amendment, and advice documents. Formatted data entry screens are provided for the issuance and amendment of all types of letters of credit, including full text, "pass-on," preliminary, standby, and special purpose in both mail and cable format. The data entry screens are augmented by automatic text generation, letter of credit models, similar-to's, standard phrases, and free-form text facilities.

 - The system provides support for sight payments, deferred payments, and bankers acceptances, as well as split currency transactions, refinanced payments, and accounts receivable processing. Multiple debit and credit parties are supported, and distribution of proceeds to transferees and assignees is provided. Acceptance and deferred payment maturity is handled automatically.

 - SEI's Letter of Credit system can be interfaced with cash management, general ledger, DDA, central liability, and customer profitability reporting systems.

 - Access to all previously entered data, including letter of credit documents and advice text, is available instantaneously through both CRT displays and hardcopy printouts.

 - Batch facilities are provided to perform those daily and periodic activities not required to be on-line, including global exposure reporting, maturity processing and standby commission collection, and interface processing.

 - The system also provides facilities for participation accounting, steamship guarantee/airway release issuance and tracking, government agency accounting and reporting, workload measurement, and other administrative functions.

- The Business Development Information System is a client record management tool designed for IBM microcomputers.

©1985 by INPUT. Reproduction Prohibited.

- Customer support services provided by SEI include:
 - Full conversion services including custom programming and consulting.
 - System installation; loading of client data into SEI computers; client training, ongoing product maintenance, enhancement, and documentation.
 - SEI provides education and training at all levels for client personnel. Its Customer Training Center operates year-round, featuring both entry-level and advanced courses with hands-on computer training.
 - A 24-hour telephone support center handles any system-oriented questions that may arise after installation.
 - SEI also furnishes single-source contacts for complete service on hardware, software, communications lines, and equipment.

INDUSTRY MARKETS

- Virtually 100% of SEI's 1984 computer services revenue was derived from the banking and financial services industry.
- In the trust marketplace, SEI's original and still largest target market, SEI management claims to have a 30% market share and believes all SEI competitors combined serve only 35% of that market.

GEOGRAPHIC MARKETS

- More than 99% of SEI's 1984 computer services revenue was derived from the U.S. and less than 1% from Canada.
- SEI sales responsibilities are divided among three domestic regions and Canada. Each domestic region is further divided into districts. Within the regions, SEI representatives are responsible for selling all software and processing services. The company also has regional representatives who specialize in selling only financial and evaluation services. In addition, a national sales group sells IBM-based SEI services to large institutions, and a consulting services group provides professional guidance to Funds Evaluation clients.
 - Eastern Region offices are located in New York City, Cambridge (MA), Atlanta, and Wayne (PA).
 - Central Region offices are located in Chicago, Houston, and Dallas.
 - Western Region offices are located in Los Angeles and San Francisco.
 - The Canadian offices are located in Toronto, Montreal, and Vancouver.

©1985 by INPUT. Reproduction Prohibited.

COMPUTER HARDWARE AND SOFTWARE

- SEI operates two data centers in Wayne (PA).
 - One Wayne data center controls the TRUST-AID service and uses:
 - 1 IBM 3084, MVS.
 - 1 IBM 3081, MVS.
 - 7 Prime 750s.
 - 17 Prime 400s.
 - 7 Prime 450s.
 - 1 Prime 850.
 - The second Wayne data center handles batch services, development, ERISA-AID processing, and new client conversions. Hardware in this facility consists of:
 - 6 Prime 750s.
 - 1 Prime 450.
 - 7 Prime 400s.
 - Terminals supported include DEC, Lear Siegler, and IBM.
- Clients access SEI's data centers via leased lines.

©1985 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO HIGHLIGHT DATED JULY 1982

SEI CORPORATION
680 East Swedesford Road
Wayne, PA 19087
(215) 687-1700

Alfred P. West, Jr., Chairman and President
Public Corporation, OTC
Total Employees: 462*
Total Revenue, Fiscal Year End 12/31/82: $39,737,000*

SEI CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	$ 39,737	$ 32,667	$ 23,060	$ 18,208	$ 14,372
. Percent increase from previous year	22%	42%	27%	27%	73%
Income before taxes	$ 6,162	$ 4,617	$ 2,878	$ 2,006	$ 1,203
. Percent increase from previous year	33%	60%	43%	68%	12%
Net income	$ 3,728	$ 2,545	$ 1,546	$ 1,103	$ 856
. Percent increase from previous year	46%	65%	40%	29%	9%
Earnings per share (a)	$ 0.72	$ 0.53	$ 0.42	$ 0.31	$ 0.24
. Percent increase from previous year	36%	26%	35%	29%	N/A

(a) Adjusted to reflect a two-for-one stock split effective January 1983.

- The above financials do not include the results of operations from TMI Systems Corporation, which was acquired by SEI in December 1982.
 - TMI, headquartered in Lexington (MA), provides software products, processing, and professional services for banking and finance institutions. It had 170 employees at the time of the acquisition.

* Does not include TMI Systems Corporation employees or revenue.

©1983 by INPUT. Reproduction Prohibited.

- The combined results of operations, on an unaudited pro forma basis, are stated below as though the acquisition had occurred as of January 1, 1981 ($ thousands, except per share data):

	1982	1981
Revenue	$50,743	$42,647
Net income	$2,235	$1,782
Earnings per share	$0.39	$0.34

SOURCE OF REVENUE

- INPUT estimates SEI's 1982 revenue was derived as follows:

Processing services	79%
Turnkey systems	12
Professional services	9
	100%

©1983 by INPUT. Reproduction Prohibited.

SEI CORPORATION
680 E. Swedesford Road
Wayne, PA 19087
(215) 687-1700

Alfred P. West, Jr., President
Public Corporation, OTC
Total Employees: 423
Total Revenue, Fiscal Year End
12/31/81: $32,667,000

THE COMPANY

- SEI Corporation, founded in 1971, offers a complete interactive personal trust information system on a remote computing basis and a minicomputer-based turnkey trust accounting system. It is the leading computer services vendor of trust automation systems.

- In March 1981, SEI made a public offering of 685,000 shares of common stock at $17.00 per share. Prior to this offering, SEI was privately held. Proceeds were used to repay long-term debt, to restructure and enhance the balance sheet, and to invest in money market instruments.

- Revenue for 1981 reached $32.7 million, a 42% increase over 1980 revenue of $23.1 million. Net income increased 65% from $1.5 million in 1980 to $2.5 million in 1981. A five-year financial summary follows:

SEI CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

FISCAL YEAR / ITEM	1981	1980	1979	1978	1977
Revenue	$32,667	$23,060	$18,208	$14,372	$ 8,292
. Percent increase from previous year	42%	27%	27%	73%	75%
Income before taxes and extraordinary item	$ 4,617	$ 2,878	$ 2,006	$ 1,203	$ 1,075
. Percent increase from previous year	60%	43%	68%	12%	92%
Net income	$ 2,545	$ 1,546	$ 1,103	$ 856	$ 783
. Percent increase from previous year	65%	40%	29%	9%	100%
Earnings per share (a)	$ 1.06	$ 0.83	$ 0.62	$ 0.48	$ 0.45
. Percent increase from previous year	28%	34%	29%	7%	N/A

(a) Adjusted for 2.33 for 1 stock split in February 1981.

©1982 by INPUT. Reproduction Prohibited.

- The company estimates that during 1981 it expended approximately $3.8 million (12% of revenue) to modify, design, and develop existing or new services, as compared to $2.4 million (10% of revenue) in 1980 and $1.5 million (8% of revenue) in 1979.

- The company's principal competitors include Bradford National Corporation, National Computer Systems, Inc., NMF Incorporated (a subsidiary of Sun Information Services), and Key Financial Systems, Inc.

- As of December 31, 1981, the company had 423 full-time employees. Currently, SEI has 459 people, functionally divided as follows:

Marketing	36
Customer administration	64
Development	72
Product planning	8
Operational support	128
Installations	49
Training	10
Administrative	92
	459

KEY PRODUCTS AND SERVICES

- Ninety-five percent of SEI's 1981 revenue was derived from processing services and 5% from turnkey system sales.

- SEI defines its target market as the 1,500 U.S. trust departments managing between $10 million and $7 billion in assets. The company's 264 clients constitute 17% of the target market.

 - The company provides its services under contracts generally having terms of two to five years, with no more than 25% of the company's customer contracts expiring in any one year.

 - During 1981, SEI added 69 clients and achieved a 90% renewal rate of customer contracts.

©1982 by INPUT. Reproduction Prohibited.

- The following presents SEI's market share of trust institutions (as of December 31, 1981) for its TRUST-AID system.

Trust Institutions	Target Number	SEI Clients	Percent of Target
Large ($500M - $7B assets)	138	29	21%
Medium ($100M - $500M)	326	77	24
Small ($10M - $100M)	1,069	158	15
TOTAL	1,533	264	17%

- SEI's average revenue based on trust department size is as follows:

	Average Annual Client Revenue	Percent of Total Revenue
Large	$400,000	45%
Medium	$115,000	33
Small	$ 45,000	22
		100%

- SEI's primary service is the TRUST-AID system, an on-line, real-time accounting and management system. TRUST-AID software is available on a remote computing basis and on SEI-installed in-house systems.

- The TRUST-AID system provides the following features:

 - Accounting and Administrative Control.

 . Generates, for each trust department account, a customized statement showing the asset position of the account and its transactions for the statement period.

 . Automates the investment of a trust account's cash balance in various short-term instruments, and schedules for processing and review disbursement checks, income receipts, customer statements, investment reviews, and other significant items for individual trust accounts.

 . Calculates and accumulates gains and losses, interest, dividends, and other income for each account.

©1982 by INPUT. Reproduction Prohibited.

 - Provides trust department management with statements of condition, various reports for Federal and state agencies, and a variety of standard and specialized reports.

 - Assists in fee processing by providing the ability to establish fee schedules for an account, to calculate fees, to report fees not collected, and to summarize fee income for the department.

- Security and Income Processing.

 - Allows for accounting of the status of a security trade from the time of execution through final settlement, reconciliation of security positions with the department's vault, a security depository or a security custodian.

 - Values securities using an automated pricing service and notifies trust department personnel of prospective corporate changes affecting securities held by trust accounts.

 - Automates the crediting of dividends, interest, and other income to the appropriate account.

 - Provides processing and reporting for special assets such as real property, mortgages, and mineral interests.

- Investment Management.

 - Provides on-line portfolio review, consolidates multiple portfolios for reporting purposes, and classifies assets into various categories.

 - Reports time and dollar-weighted rates of returns, portfolio composition, and account growth.

- When a bank becomes an SEI client, its trust operations must be converted from a manual setup or some other computer system to the SEI TRUST-AID system. The process takes 90 to 120 days and includes the transfer of the existing data base to the TRUST-AID system as well as the training of the customer's staff.

- SEI clients can use TRUST-AID software on a remote computing basis, with printing provided either at SEI's data center or by a high-speed printer installed at the client site, or as an in-house system.

 - Approximately 95% of SEI's clients ranging from small to large banks, access the TRUST-AID system on a remote computing basis.

 - Terminals installed at client trust departments are tied into a dedicated SEI network connected to one of SEI's three data centers.

©1982 by INPUT. Reproduction Prohibited.

- Customer statements and management reports are printed at SEI and mailed to SEI clients.
- Approximately 10% of SEI's remote service clients, normally the medium to large-sized trust departments, use a service option that permits printing high volume reports and customer statements on-site.
 - Prime 250 or 450 minicomputers are installed at client sites with high-speed impact printers and tape storage options.
 - The network is controlled by two Prime 400s located within SEI's operations center.

- Five percent of SEI's clients have a standalone TRUST-AID turnkey system installed.
 - Depending on the client's requirements, a Prime 450, 750, or 850 is purchased or leased through SEI.
 - Most modules of the TRUST-AID system are available for the in-house system.
 - Pricing varies depending on individual configuration requirements.
 - Clients with an on-site TRUST-AID system include Wells Fargo, Shawmut Bank of Boston, and InterFirst Bank, Dallas.
- In late 1981, SEI introduced TRUSTPAC, a minicomputer-based trust accounting and management system for small trust departments. TRUSTPAC was acquired from a software house in Connecticut.
 - TRUSTPAC operates on Data General minicomputers and is a standalone turnkey system.
 - The system was developed for community bank trust departments handling up to $100 million in trust assets.
 - TRUSTPAC is priced at about $45,000. Although there was no significant revenue generated from this product in 1981, management anticipates it may contribute up to 2% of total revenue in 1982. There are 12 systems installed, including the installations acquired from the software house.

- In conjunction with the TRUST-AID service, SEI developed CUSTODY-AID, which establishes a communications link between the TRUST-AID customer and a custodian. The link is initiated as a customer's trade records are updated during processing in a real-time, interactive security movement and

©1982 by INPUT. Reproduction Prohibited.

control environment. Communication continues as the movement of securities is tracked until their final settlement. The custodian can settle instructions, post income, produce automatic affirmations, mature assets, reconcile positions, and transmit trade. Over 20 clients use the CUSTODY-AID interface.

- Also integrated with the TRUST-AID system is the Performance Measurement Reporting (PMR) system. PMR facilitates report generation.
 - Portfolio components are separately tracked and compared against the appropriate index.
 - The preferred regression analysis technique is employed to calculate the time-weighted rates of return.
 - Clients can customize reports to include any or all tables and consolidate accounts for Master Trust Reporting.
 - There are approximately 20 clients using the PMR program.
- In 1981, SEI began offering an Employee Benefit Reporting (EBR) system and a participant recordkeeping system (ERISA-AID) as separate software modules which can be run on a client's minicomputer and linked to the SEI network.
 - EBR is an add-on to the TRUST-AID system.
 - EBR has been successful in attracting new and larger customers to the TRUST-AID system because of its dependency on TRUST-AID software.
 - EBR produces information for the Department of Labor's Form 5500 (including Sections 13 and 14 and 3% reporting by party and interest transaction). It produces management reports which include a balance sheet, statement of operations, the source and applications of funds, schedules of acquisitions and dispositions, asset management reports, fail-float reporting, accrual accounting, trade date accounting, and unlimited transaction maintenance and report pre-editing. EBR unitizes accounting and integrates accounting and reporting.
 - There are currently 15 clients of this service.
 - ERISA-AID operates independently of the TRUST-AID system and enables clients to control the processing and reporting of participant accounting.
 - The system handles various plans: Money Purchase, Profit Sharing, Thrift, Savings, IRAs, ESOPs, TRASOPs, and 401(K)s.
 - Clients can process according to their own schedules, separately track multiple investment funds, erase allocations, process carry

©1982 by INPUT. Reproduction Prohibited.

forwards and reallocations, calculate vested money, make vesting adjustments for breaks in service, and set up multiple vesting schedules.

- Spreadsheet reports can be designed to meet the criteria specified from more than 500 data items available.
- Calculations can be performed to produce new data items.
- There are currently 30 clients of this service including North Carolina National Bank and Booz, Allen and Hamilton, Inc.

- In February 1982, SEI announced the Personal Financial Account (PFA) system which consolidates banking and trust services.
 - PFA's design is based on the Cash Management Account (CMA) introduced by Merrill Lynch in 1977. Similar products are now offered by Sears/Dean Witter, Shearson/American Express, and Prudential/Bache.
 - Services available through PFA will include: checking, automatic money market fund investment, time deposits, debit/credit card, line of credit, secured and unsecured loans, security trading, security safekeeping, bill paying, tax reporting, and cash flow projections.
 - The system will be appropriate to clients of all sizes. SEI expects to convert the first client during the third quarter of 1982.
- A new subsidiary, SEI Financial Services Company, was formed in 1981.
 - In January 1982, the subsidiary began furnishing automated services that perform daily sweeps of trust account cash balances, investing available cash in Trust Funds Liquid Asset Trust, a no-load, open-end money market fund managed by SEI Financial Services and advised by Thorndike, Doran, Paine and Lewis. SEI has 48 clients using this service.
 - Later this year SEI expects to start other funds and initiate security execution services through SEI Financial Services.

INDUSTRY MARKETS

- One hundred percent of SEI's revenue is derived from the banking and financial industry, both from trust departments of commercial banks and trust and title companies.

GEOGRAPHIC MARKETS

- Virtually all of SEI's business is concentrated in the United States. SEI maintains offices in Philadelphia, Chicago, and Los Angeles.

©1982 by INPUT. Reproduction Prohibited.

COMPUTER HARDWARE AND SOFTWARE

- SEI operates two data centers in Wayne (PA), and one center in Los Angeles.
 - One Wayne data center controls the TRUST-AID service and uses:
 - 7 Prime 750s.
 - 17 Prime 400s.
 - 7 Prime 450s.
 - 1 Prime 850.
 - The second Wayne data center handles batch services, development, ERISA-AID processing, and new client conversions. Hardware in this facility consists of:
 - 6 Prime 750s.
 - 1 Prime 450.
 - 7 Prime 400s.
 - The Los Angeles data center became operational in March 1981. A total of eight machines are in this facility consisting of:
 - 1 Prime 400.
 - 3 Prime 450s.
 - 4 Prime 750s.
 - Terminals supported include DEC and Lear Siegler.

©1982 by INPUT. Reproduction Prohibited.

Paul Hendrios
Craig Atwater

COMPANY HIGHLIGHT

SEI CORPORATION
680 E. Swedesford Road
Wayne, PA 19087
(215) 687-1700

Alfred P. West, Jr., President
Private Corporation
Total Employees: 313
Total Revenues, Fiscal Year End 12/31/79: $18,208,045

THE COMPANY

- SEI Corporation was formed in Pennsylvania in 1971 and was originally involved in using simulation for commercial loan officers. SEI now offers a complete interactive personal trust information system on a remote computing service basis.

- Revenues for 1979 reached $18.2 million, a 27% increase over 1978 revenues of $14.3 million. 1979 net income increased 29% over 1978. SEI anticipates 1980 revenues will reach $23 million. A five year financial summary follows:

SEI CORPORATION
FIVE YEAR FINANCIAL SUMMARY
($ Thousands, Except Per Share Data)

ITEM \ FISCAL YEAR	1979	1978	1977	1976	1975
Revenues	$18,208	$14,372	$ 8,292	$ 4,734	$ 3,008
. Percent change from previous year	27%	73%	75%	57%	138%
Income before taxes and extraordinary item	$ 2,006	$ 1,203	$ 1,075	$ 561	$ 433
. Percent change from previous year	68%	12%	92%	30%	218%
Net income	$ 1,103	$ 856	$ 783	$ 391	$ 350(A)
. Percent change from previous year	29%	9%	100%	12%	196%
Earnings per share	$ 1.49	$ 1.12	$ 1.05	$.53	$.31
. Percent change from previous year	33%	7%	98%	71%	300%

(A) Extraordinary item reported.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- SEI management attributes its growth in revenues to its entrance into the larger bank market in 1977 and 1978 and the resulting higher fees for services. In addition, SEI has introduced several new services.

- Major competitors of SEI include Bradford National Corporation, Comshare, Shear Development Corporation, and Key Financial Systems.

- SEI personnel are functionally divided as follows:

-	Marketing	16
-	Customer administration	45
-	Development	75
-	Product planning	7
-	Operational support	112
-	Installations	33
-	Training	4
-	Administrative	21
	Total	313

KEY PRODUCTS AND SERVICES

- Ninety-five percent of SEI's revenues are derived from the Trust-Aid Service, a computer-based service which provides interactive, real-time trust accounting and management for trust departments of all sizes.

 - The system is interactive for data entry and inquiry, and updates the master file in real-time .

- Trust-Aid Service provides the following features to approximately 250 customers including Wells Fargo Bank, Seafirst Corporation (Seattle), Philadelphia National Bank, Guaranty Trust of Canada, and the State of Pennsylvania:

 - Interactive, real-time posting which allows for immediate error detection and correction.

 - A security movement and control system which helps manage the trade, settlement, and registration process.

 - Advance notice of dividends, coupons, registered bond interest, and other income.

 - Schedule of distributions and disbursements, fixed amount, percentage of income or principal cash, or amount unknown are all processed.

 - Common funds, short term investment funds, and collective funds are processed and comprehensively reported.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Advance notice of all real estate, mortgage, note, and income with automatic posting of income and adjustment of principal asset balances.

- Automatic income and principal fees on schedules designed by customer.

- Special audit reports prepared for state, federal and internal auditors and examiners.

- All trust department data is available to administrators through interactive retrieval of over 100 reports including asset reviews and customer transactions. A Report Generator allows customized reporting of information contained in the broad data base so that reports can be retrieved with specific information relative to administrators.

- Forms and content of all end product documents are designed by trust departments.

- An automated cash management system keeps cash balances fully invested and provides cash to cover overdrafts.

- A comprehensive pricing system which prices all listed and over-the counter stocks and all corporate, municipal, and federal debt issues.

- Taxlot accounting with the ability to have different state and federal tax costs, acquisition dates and decedents. In addition, Trust-Aid provides for the automatic production of tax forms.

- Trust-Aid is continually being enhanced to meet the changing needs of trust departments. The system enhancements are immediately made available to client banks.

- Trust account information is stored on minicomputers located at SEI headquarters in Wayne, PA and accessed via Digital Equipment Corporation Decwriters and VT 100s, Lear Siegler, Inc. ADM-3 CRTs, and Perkin-Elmer Corporation Foxes.

- When a bank becomes an SEI client, its trust operations must be converted from a manual setup or some other computer system to the SEI Trust-Aid System. The process takes 10 to 20 weeks and includes the transfer of the existing data base to the Trust-Aid computer as well as the training of the customer's staff.

- SEI has recently introduced two additional options for the Trust-Aid System:

 - A distributed processing system to enable a bank to schedule and execute its own reports including statements. The network is controlled by a Prime 550 minicomputer located within SEI's operations center.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

 - Depending on the client's requirements, a Prime 150, 450, 550, or 650 minicomputer is used as the remote transmission controller with various printer and tape storage options. Cost of the DDP option will average approximately $4.50 per account, exclusive of hardware.

 - There are currently five clients including Wells Fargo Bank, N.A. and Seattle First National Bank using the in-house print system.

- A user site hardware offering for Trust-Aid was announced in January 1980. There are not, as yet, any installations of the system.

- In 1979, SEI also began offering accounting applications, a new employee benefit reporting system (MASTER-AID), and a new participant recordkeeping system (ERISA-AID) as separate software modules which can be run on a client's minicomputer which is linked to the SEI network. The user-site hardware services include software, non-technical support, and operational support.

 - SEI's extended employee benefit trust reporting system which includes master trust reporting is called MASTER-AID. Management has high expectations for this product which it claims to be comprehensive and for which there is no significant competition.

 - MASTER-AID costs a minimum of $2,000 per month and is an add-on to the Trust-Aid system. SEI management claims the unique MASTER-AID has been successful in attracting new and larger customers to the Trust-Aid system because of MASTER-AID's dependency on Trust-Aid.

 - MASTER-AID accounts for and produces information for the Department of Labor's Form 5500 (including Sections 13 and 14 and 3% reporting by party and interest transaction); it produces management reports which include a balance sheet, statement of operations, the source and applications of funds, schedules of acquisitions and dispositions, asset management reports, fail-float reporting, accrual accounting, trade date accounting, and unlimited transaction maintenance and report pre-editing. MASTER-AID unitizes accounting and integrates accounting and reporting.

 - ERISA-AID operates independently of Trust-Aid and enables clients to control the processing and reporting of participant accounting.

 - The system handles various plans: Money Purchase, Profit Sharing, Thrift, and Savings.

 - Clients can process according to their own schedules, separately track multiple investment funds, erase allocations, process carry forwards and reallocations, calculate vested money, make

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

vesting adjustments for breaks in service and set-up multiple vesting schedules.

. Spread Sheet reports can be designed to meet the criteria specified from more than 500 data items available.

. Calculations can be performed to produce new data items.

. Fidelity Bank in Philadelphia and Booz, Allen and Hamilton, Inc., are clients of this service.

- In conjunction with the Trust-Aid service, SEI developed Custody Interface which establishes a communications link between the Trust-Aid customer and a custodian. The link is initiated as a customer's trade records are updated during processing in a real-time, interactive security movement and control environment. Communication continues as the movement of securities is tracked until their final settlement. The custodian can settle instructions, post income, produce automatic affirmations, mature assets, reconcile positions, and transmit trade.

 . State National Bank of Connecticut is the first SEI client to use the custody service in conjunction with The Morgan Guaranty Trust Company of New York.

- Also integrated with the Trust-Aid System is Performance Measurement Reporting (PMR) System. PMR facilitates report generation.

 . Portfolio components are separately tracked and compared against the appropriate index.

 . The preferred regression analysis technique is employed to calculate the time weighted rates of return.

 . The client can customize reports to include any or all tables and consolidate accounts for Master Trust Reporting.

 . There are currently 27 clients using the PMR program.

• SEI also reports the development of a comprehensive oil and gas processing system which is currently being tested at the First International Bank of Houston.

 - System capabilities include the handling of numerous leases, and the ability to input data concerning the receipt of income from check information. Processing of income can be handled by the client or during the nightly update routines run at SEI's data center.

 - The system provides for the storage of detailed information on location, production and leases.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

INDUSTRY MARKETS One hundred percent of SEI's revenues are derived from the banking and financial industry, both from trust departments of commercial banks and trust and title companies.

GEOGRAPHIC MARKETS SEI's business is concentrated in the United States. Its services are widely dispersed among the regions of the U.S.

COMPUTER HARDWARE AND SOFTWARE

- SEI operates two data centers in Wayne, PA.
 - One data center controls the Trust-Aid service and houses:
 - . One Prime 750 and 33 Prime 400 minicomputers.
 - The new data center handles batch services, development, ERISA-AID processing, and new client conversions. A total of eight machines are in this facility consisting of:
 - . One Prime 750, Prime 550s and Prime 400s.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

May 1998

SE Technologies, Inc.- Baan Services Providers

Contact Information for Baan Services in North America
VP, Baan Business Development:
Bob Schwartz
E-mail: **bob@west.se-tech.com**
SE Technologies, Inc.
2777 Summer Street
Stamford, CT 06905
USA
Phone: **203-357-1772**
Fax: **203-964-8223**
Internet: **www.se-tech.com**

The following profile outlines the services and support offered by SE Technologies for Baan Services.

Company Background

SE Technologies, Inc. (SE) is a leading global provider of information technology consulting, systems integration, and technical support services. Founded in 1980, the company specializes in the implementation of enterprise application software using advanced methodologies to ensure rapid deployment and dependable implementation for manufacturers and distributors worldwide.

For the past 18 years, from MRP to today's enterprise application software, SE Technologies has realized the uniqueness and importance of helping customers improve their management of material flow from source point to final consumer. After hundreds of successful projects, they know how to leverage enabling technologies for maximum strategic results.

© 1998 by INPUT. Reproduction Prohibited

Future ERP growth is expected to come primarily from sales to midrange vertical industrials, and SE Technologies is poised to become a preferred Baan implementation and customization partner by focusing on the midrange vertical Automotive, Electronics/High Tech, Medical Devices, CPG/Process and A & D industries.

Spanning the entire supply chain, globally for each industry, SE's Baan practice allows strong central control over all present and future implementations. By delivering services in a tightly integrated fashion, SE eliminates the gaps and hand-offs that can slow or derail projects, leveraging operational efficiencies to deliver results in very short time frames.

SE Technologies, a strong Baan Global Consulting Partner, will continue to utilize their industry experience and technical resource strengths to deliver innovative, quantifiable results to both North American and global clients.

SE Technologies, a privately held company, has offices in: Irvine and San Jose, CA; Stamford, CT; Chicago, IL; Boston, MA; Troy, MI; Herndon, VA; Seattle, WA; Mississauga, Ont., Canada; France; Germany; India; The Netherlands; Singapore; and the United Kingdom.

Baan Activities

SE Technologies entered the North American Baan services market in 1994. However, many of these employees have had consulting experience with Baan products and services since 1991.

Employees

Worldwide, SE has 440 employees, of which 340 are dedicated to their Baan practice. In North America, there are 267 employees supporting SE's Baan practice. Exhibit 1 identifies six primary Baan skill categories, and notes SE's estimated growth in staff in these areas over the next twelve months.

Exhibit 1

SE Technologies Baan Staffing

Type of Staff	Current Number	Growth % 12 Months
Business Consultants	22	60%
Project Directors	10	75%
Project Managers	16	75%
Application Consultants	97	75%
Technical Consultants	111	75%
Post-implementation Support Personnel	6	-
Other	5	-
Total	267	71%

Source: SE Technologies

© 1998 by INPUT. Reproduction Prohibited

Implementation Approaches

SE Technologies has a number of industry/vertical-specific templates, DEM-based rapid implementation models, legacy system data migration toolkits, XpertNet—a virtual knowledge-sharing database, and a Target-based Rapid Deployment methodology. When combined these tools dramatically reduce the timespan for Baan implementations.

Ongoing Support Offerings

SE Technologies has established competency centers for vertical markets in Electronics, Medical Devices, High Tech Manufacturing, Automotive, A&D, and CPG/Process Industries. In addition, they have fully equipped training centers for customer follow-on training.

SE provides database and systems administration support services for customers through their Baan Systems and Performance Practice, and Dial-A-DBA program. SE Technologies' Software Plus also provides support and migration services to customers that have engaged SE for customizations or extensions to the Baan product. SE, an Authorized Gold Partner Award winner and Global Customization Partner, has a Catalog of Enhancements for Baan functionality extensions, and API's (integration) for bridging Baan with other enterprise applications.

SE's Electronic Commerce (Baan EDI, and web integration), Data Warehousing, DEM and Management Reporting consulting services, and Solution Centers, assist their customers to continuously improve and extend their capabilities beyond ERP.

SE is a Baan Global Upgrade Partner for customers who desire assistance in moving to a higher release of the software. In addition, SE's outsourcing practice enables companies to focus on their business objectives while SE professionals develop and support preeminent IT infrastructures at their customer sites.

Pricing Approaches

SE Technologies can provide flexible pricing schemes to meet individual customer requirements, including Time and Materials, Performance Incentive programs, and Fixed Price technical and implementation services.

Post implementation support is available on a 7x24, 5x8 and time and material basis for application and technical support via SE's 1-800-SETECHNOlogies support hotline.

Alliances and Partnerships

SE Technologies has growing consulting practices in Hyperion, Aurum, Berclain, Meta4, i2 Technologies, and Proloq; and support customer reporting, web integration and information technology requirements with service offerings in TopTier, Cognos, UDMS and other leading technologies. In addition, partnerships with leading hardware providers such as Compaq, HP, SUN, IBM and DEC, and leading database providers such as Microsoft, Oracle, Informix and Sybase enable SE to bundle complete Baan business solutions for their customers.

© 1998 by INPUT. Reproduction Prohibited

Exhibit 2

Vertical Market Expertise

Vertical Market	Sub-segment	% of Revenues	% of Projects
Discrete Manufacturing	• Automotive • Aerospace & Defense • Electronic • Mechanical/Engineering	70%	70%
Process Manufacturing	• CPG/Process	20%	20%
Distribution	• Retail • Wholesale	5%	5%
Telecom/Utilities/Media		5%	5%

Source: SE Technologies

Vertical Market Competencies

SE focuses on the automotive, electronics/high tech, medical devices, CPG/process and A&D subsectors of the vertical markets noted in Exhibit 2. The table also indicates the percentage of SE revenues and projects represented by each vertical market.

Exhibit 3 details SE's participation in seven broad market categories, in terms of the level of consulting or implementation involvement (e.g., consulting with the client, who will then perform the implementation, or implementing the Baan system for the client).

Exhibit 3

Level of Vertical Market Involvement, by Activity

Vertical Market	Consulting	Implementatio
Aerospace & Defense	Medium	High
Automotive	Medium	High
Process Industries	Medium	Medium
Hybrid	High	High
Project Industries	Medium	Medium
Electronics	High	High
General Manufacturing	High	High

Source: SE Technologies

Strategic Positioning

SE Technologies has a consistent track record of providing rapidly deployed, successful Baan implementations delivered on time and within budget. Their accomplishments also include implementations completed below budget and ahead of schedule. SE has a significant global presence, and one of the largest teams of experienced Baan consultants in North America. SE's in-depth knowledge of their focus vertical markets has significantly enriched Baan implementations for their customers. SE's 14 branch offices provide both local support and relationships while leveraging their global reach. SE's unique complement of industry, application, DEM and technical expertise (industry templates, migration toolkits, rapid implementation templates), reduce the complexity of any Baan

© 1998 by INPUT. Reproduction Prohibited

implementation and fosters maximum return and minimized risk of their customer's ERP investment. Their company culture is based on SE's Transfer Knowledge Objective, (TKO™), designed to transfer Baan knowledge quickly and completely to their customer's staff, while building a Baan competency center inside their (the customer's) organization.

Plans for the Future

SE Technologies is continuing its aggressive growth in staff size and will be opening new offices in North America. In addition, SE is keeping pace with the growth of the Baan product as it expands by continuing the comprehensive growth of their consulting expertise in such areas as Aurum, Hyperion, Berclain, Proloq, TopTier and others.

Selected Customer Projects

The following four client profiles demonstrate SE Technologies' Baan implementations in the United States.

Molecular Probes, Inc.

SE Technologies, Inc.'s no-nonsense approach to delivering the BAAN IV solution on-time and under budget enabled the company to present client Molecular Probes, Inc., with a refund check. In a ceremony marking implementation of the BAAN ERP suite, the companies praised the new system's ability to streamline Molecular Probes' research, product development and distribution processes—and SE Technologies' ability to manage the installation so effectively the client realized real savings in the development effort. While the company prides itself on delivering implementations "on-time and on-budget," it frequently completes its work ahead of schedule and under-budget, as it did with Molecular Probes.

Overland Data

SE Technologies has installed the BAAN NT Enterprise Resource Planning solution in the U.S. and British offices of Overland Data, a manufacturer of tape-storage devices for workstations, networks, and midrange computer systems. The project was completed within its estimated budget and on-schedule in just seven months, even though it required solutions to complex issues including global procurement and distribution, and handling of multiple currencies.

Using Baan's core modules in manufacturing-distribution, master production scheduling, and finance, SE linked Overland Data's major production operations in San Diego, Calif., with its European headquarters in Wokingham, England. The two sites' implementation was completed at the same time, connecting staff members and operations over 6,000 miles apart.

Puma Technology

Puma Technology, a developer of innovative data exchange software for mobile computer users, is realizing significant cost savings because of a BAAN IV ERP system rapidly deployed by SE Technologies, Inc. SE completed the installation on an aggressive schedule, with strict budgetary constraints—and with minimal disruption to daily operations. To achieve this, SE used its Transfer Knowledge Objective , or TKO, to involve Puma's

© 1998 by INPUT. Reproduction Prohibited

management and staff in mapping their business processes to the Baan software and planning and undertaking its installation.

The BAAN IV system provides Puma with real, bottom-line advantages. Not only has the company's shipping cycle been reduced to 48 hours, but it expects to cut costs substantially because the system automates and integrates fundamental information-gathering processes, and quickly feeds necessary operating data to Puma's staff and suppliers.

Snap-on Tools

Snap-on Tools, a longtime leader in the manufacture and distribution of professional quality hand tools for the automotive services industry, has significantly reduced its manufacturing and distribution costs with a BAAN IV ERP solution installed by SE Technologies, Inc. Completed on schedule and within its estimated budget, the system has cut processing time and automated back-office operations at five manufacturing plants and two distribution "triads"—a distribution facility linked with two customer service support centers.

Snap-on Tools determined it had to replace its mainframe and regional computing platforms with an enterprise-wide network that would allow its staff to provide more focused and responsive support to customers in the U.S. and abroad. SE helped them eliminate all outmoded systems. By mid-1998, the company expects to shut down its mainframe. In working toward that goal, SE will continue to implement the BAAN IV system at additional Snap-on distribution triads and manufacturing plants throughout North America.

© 1998 by INPUT. Reproduction Prohibited

SHL SYSTEMHOUSE INC.

50 O'Connor Street
5th Floor
Ottawa, Ontario, Canada
K1P 6L2
Phone: (613) 236-1428
Fax: (613) 238-4029

Chairman & CEO:	John R. Oltman
Status:	Public Corporation
Stock Exchanges:	NASDAQ, Toronto, Montreal
Total Employees:	3,607 (8/92)
Total Revenue:	$738,622,000*
Fiscal Year End:	8/31/92

*All financial information is expressed in Canadian dollars unless otherwise stated

Key Points

- SHL Systemhouse's focus is to deliver complete transformational outsourcing services to clients moving their information technology systems towards client/server architecture by providing systems integration and consulting services, computing and network services, and technology deployment.
- SHL believes that its success in the global market is dependent on achieving success in the U.S. commercial market and the rapidly growing Latin American markets. Since fiscal 1991, SHL has acquired five U.S.-based systems integration firms, expanding its client/server and open systems skills base and customer base in targeted key U.S. commercial markets, and has obtained contracts in Mexico and Venezuela.
- During fiscal 1992, SHL completed the integration of its Systemhouse International Ltd. and ComputerGroup Limited operations in Europe to form SHL Systemhouse Europe, significantly expanding the company's systems integration, consulting, and systems management capabilities.
- During fiscal 1992, the operations of SHL in Canada and its ComputerLand Canada subsidiary were more closely aligned to exploit their complementary strengths in full-service outsourcing with the launch of its Desktop Systems Management service offering.

Copyright 1993 by INPUT. Reproduction Prohibited.

Company Description

SHL Systemhouse Inc., founded in 1974, provides systems integration, professional services, and systems operations to commercial and government clients around the world with operations in Canada, U.K./Europe, Mexico, Latin America, Asia, and the U.S.

The company also provides microcomputer hardware and software integration services through its ComputerLand Canada subsidiary. SHL is in the process of more closely aligning the operations of ComputerLand Canada with its other services.

In July 1992, SHL completed a public offering of 4.6 million shares of its common stock, netting the company $47.5 million in proceeds.

In January 1993, BCE Inc. (Northern Telecom's and Bell Canada's parent), sold its 22% stake in SHL for approximately $65 million in an underwriting agreement with Gordon Capital Corp.

- BCE originally acquired the SHL stock in 1990 when Kinburn Technology Corporation, previously the majority owner of SHL, announced it was unable to meet a $700 million debt. Kinburn's interest in SHL was taken over by BCE and a syndicate of Canadian banks. The bank syndicate sold its SHL shares in February 1992.

- In June 1992, SHL and BCE cancelled a proposed partnership in which BCE would have increased its investment in SHL to 60% in a complex transaction including an outsourcing arrangement for BCE's extensive data centers.

In February 1993, SHL announced it would issue, on a private placement basis to Warburg, Pincus Investors, LP, 4.5 million SHL common shares at a purchase price of $9.00 per share for total gross proceeds to SHL of $40.5 million. SHL intends to use these proceeds to finance new capital assets related to the delivery of long-term contracts and for working capital.

Structure and Operations

SHL operates through three principal Strategic Area Units, supported by Strategic Market Services and Strategic Technology Services.

- In addition, the outsourcing (systems operations) business is carried out primarily by Computing and Network Services, working in cooperation with the Strategic Area Unit in the applicable locale. Each of these units operates as a separate profit center.

- A central corporate group coordinates and supports the finance, administrative, human resource, and legal functions in all areas of the company.

Copyright 1993 by INPUT. Reproduction Prohibited.

Strategic Area Units (SAUs) include Canada/Pacific (with five regions, including responsibility for the Pacific Rim), U.S./Mexico/Central and South America, and Europe.

Strategic Marketing Services (SMS) provides vertical market sales, marketing support, and expertise to SHL customers through Strategic Market Units--each of which has access to senior personnel with experience in information technology services in specific industries. There are currently eight Strategic Market Units--Postal, Telecommunications, Public Safety, Energy, Human Services, Insurance, Financial Services, and Logistics (focusing on retailing, manufacturing, and consumer products).

Strategic Technology Services (STS) ensures that the delivery units throughout the company are equipped with the necessary skills, methodology, and tools to remain abreast of rapidly evolving and increasingly complex information technology systems. STS includes the following units:

- The Technology Network Division, which is the chief vehicle for the understanding, evaluation, and dissemination of information to customers and employees on new technologies and applying this knowledge to projects as necessary.
- Technology Research and Alliances, which works with technology partners, clients, and SHL technology experts to test and communicate the practical application of new technologies.
- Delivery Oversight, which provides central assistance and evaluation of delivery and implementation of projects by geographical units.
- SILC Methodology Development, which is responsible for the enhancement of SHL's Systems Integration Life Cycle (SILC) methodology and the oversight of its use on all SHL projects.

Computing and Network Services provides systems operations at the client site, network and communications management, and transformational outsourcing to SHL clients. In conjunction with the Strategic Area Units, this division operates data centers in Halifax, Calgary, Los Angeles, Houston, and London.

Alliances

SHL has technology alliances with the following vendors:

- Bachman Information Systems, for the use and resale by SHL of Bachman's computer-aided software engineering products.

Copyright 1993 by INPUT. Reproduction Prohibited.

- Ameritech Information Systems, for technical and marketing support in the U.S. and outside Canada.
- Easel Corporation, for marketing and use by SHL of the EASEL Workbench product for client/server application development.
- IBM Canada, with SHL providing technical support to IBM for the RS/6000.
- Canada Post Systems Management Ltd., to jointly implement "track and trace" systems worldwide.
- Advanced Management Systems, C.A., Venezuela, with an exclusive agreement to market systems integration services in Venezuela and Latin America.
- Bell Mobility Cellular, to market Bell Mobile's LINK customer information and billing system.
- Samsung of Korea, a partnership to provide computer systems integration and outsourcing services in the Far East and North and South America.
- Image Business Systems (giving SHL exclusive rights to distribute the IBM ImageSystem software in Canada)

Financials

SHL's total fiscal 1992 revenue reached $738.6 million, a 7% increase over fiscal 1991 revenue of $688.9 million.

For fiscal 1992, SHL recorded operating income before interest, taxes, and unusual items of $6.9 million.

- After the unusual items, interest, and taxes, SHL reported a loss of $9.5 million, compared with a net loss of $19.9 million in fiscal 1991.
- The unusual items, totaling $6.4 million, include $4.9 million for expenses incurred as a result of the termination of negotiations for a proposed strategic partnership with BCE Inc. and Bell Canada and $1.5 million associated with completing the restructuring of senior management.

A five-year financial summary follows:

Copyright 1993 by INPUT. Reproduction Prohibited.

SHL SYSTEMHOUSE INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	8/92	8/91	8/90	8/89	8/88
Revenue	$738.6	$688.9	$689.2	$630.8	$230.1
· Percent change from previous year	7%	--	9%	174%	37%
Operating revenue (a)	$273.8	$259.9	$247.4	$232.3	$123.0
Income (loss) before taxes	$(10.1)	$(17.9)	$(37.6)	$19.2	$7.3
· Percent change from previous year	(b) 44%	(c) 52%	(d) (296%)	163%	(69%)
· Gross margin	--	--	--	3%	3%
Net income (loss)	$(9.5)	$(19.9)	$(40.6)	$15.3	$5.8
· Percent change from previous year	52%	104%	(365%)	(e) 164%	(e) (76%)
· Net margin	--	--	--	2%	3%
Earnings (loss) per share	$(0.25)	$(0.53)	$(1.10)	$0.58	$0.22
· Percent change from previous year	53%	52%	290%	164%	N/A

(a) Represents total revenue less the cost of hardware and licensed software sold.

(b) Includes unusual charges of $6.4 million relating to negotiations with BCE and Bell Canada ($4.9 million) and senior executive terminations ($1.5 million).

(c) Includes unusual charges of $25.3 million associated with restructuring and other items.

(d) Includes unusual charges of $35.6 million resulting from writedowns and reductions in goodwill.

(e) Includes credits of $3.0 million and $2.1 million for fiscal 1989 and 1988, respectively, related to the recovery of unrecorded tax loss carryforwards.

During fiscal 1992, SHL continued to intensify its focus on growing the services component of its revenue base. For fiscal 1992, services revenue increased by about $44.7 million, or 21% over fiscal 1991.

- For fiscal 1992, revenue from the sale of workstation-based products have decreased compared to the preceding two fiscal years to the the company's shift in focus to value-added services revenue, price reductions, and (in the U.K.) the effects of the recession.

- SHL will continue to focus on growing its service revenue base in the outsourcing market and new geographic markets. These areas include the U.S., Latin America, Asia, and targeted international markets.

Copyright 1993 by INPUT. Reproduction Prohibited.

Revenue for the three months ending November 30, 1992 reached $201.6 million, a 10% increase over $184.3 million for the same period in 1991. Net income reached $309,000, compared to net losses of $1.3 million for the same period a year ago.

Acquisitions

In February 1993, SHL signed a letter of intent to acquire AST TransAct Ltd., a leading U.K.-based banking and financial services company. AST is 75% owned by the Royal Bank of Canada and 25% by members of management. The acquisition has not yet been finalized.

- AST operates a data center facility in London that was formerly Royal Bank of Canada's European data center. AST provides systems management services to financial institutions, credit/debit card processing, and recovery management systems. It also develops custom systems for banking and finance customers.
- AST, with over 130 employees, had annual revenues exceeding $22 million in 1992.
- AST will continue to provide systems operations and application development services to the Royal Bank of Canada's European operation and to other European financial institutions. Other AST customers include Marks and Spencer, AIB Group of Ireland, Diners Club, and Westpac Banking Corporation.
- The acquisition will help firmly establish SHL's systems operations and outsourcing capabilities in the U.K. and Europe.

In January 1993, SHL acquired Benson, Douglas & Associates, Inc. (BD&A) of Cary (NC).

- BD&A, founded in 1989, provides strategic planning, programming, and systems integration services with an emphasis on UNIX, client/server, open systems, and pen-based technologies.
- BD&A, with over 60 employees and 1992 revenue of about $4 million, will become part of SHL's Arlington (VA)-based Mid-Atlantic Region and will continue to serve clients from its offices in Cary (NC) and Atlanta (GA).
- BD&A clients include Northern Telecom, Sara Lee, Lever Brothers, Wal-Mart, Oracle, GTE, and RJR Nabisco.
- The acquisition is consistent with SHL's strategy of expanding within the Mid-Atlantic Region.

Copyright 1993 by INPUT. Reproduction Prohibited.

In January 1993, SHL acquired the New Brunswick office of Rockwood Informatics Corp., which has a staff of 21 professional and support personnel.

- Rockwood, one of the principal computer consulting companies in New Brunswick, specializes in software development for government applications. Clients include: the New Brunswick Departments of Advanced Education, Transportation, and Supply and Services; the Atlantic Canada Opportunities Agency; and a number of commercial clients including Co-Op Atlantic.

- The acquisition provides SHL with an established project office in New Brunswick that will pursue opportunities in systems integration and systems management in the province.

In December 1992, SHL acquired ABRAXAS International, Inc. of Orlando (FL).

- ABRAXAS, with about 50 employees and 1992 revenue of $4.4 million, provides integrated business communications solutions in the areas of voice and data communications, network management, and switching systems.

- ABRAXAS, with offices in Orlando and Boca Raton (FL) and Raleigh/Durham (NC), focuses on the telecommunications industry. Its major customers include AT&T, Northern Telecom, Bell Northern Research, MCI, GTE, and Siemens-Nixdorf.

- The operations of ABRAXAS have been merged into SHL's Telecommunications Market Unit.

In December 1992, SHL acquired INTERACTIVE Systems Corporation of Naperville (IL) from Eastman Kodak Company, including INTERACTIVE's UNIX systems consulting and custom software development business. In January 1993, SHL sold off INTERACTIVE's networking software to INTERACTIVE management.

In September 1992, SHL acquired Mid-Atlantic Business Systems (MABS) of Ellicott City (MD).

- MABS is a systems consulting consulting firm specializing in application development, data base administration, and related systems services.

- MABS has performed work for U.S. government agencies such as the Department of Justice and the Treasury. Its skills will be

Copyright 1993 by INPUT. Reproduction Prohibited.

leveraged by SHL in the federal market and other public sector agencies.

- MABS, with 26 employees and 1991 revenue of $2.0 million, has merged its operations into SHL's Mid-Atlantic Region.

In July 1992, SHL acquired computer-aided dispatching technology and development staff of Lynx Graphics in Winnipeg. Lynx, a privately held corporation, has expertise in fault-tolerant LANs, and has developed computer-aided dispatch systems for emergency services such as police and fire departments across North America.

In June 1992, SHL acquired The Strifler Group, Inc. of Dallas (TX) for $4 million.

- The Strifler Group, a privately-held company with 30 employees, provides open systems integration services. Its major clients include the Dallas/Ft. Worth International Airport and large Texas-based corporations such as Texas Industries Inc. and HCB Contractors.

- The Strifler Group grew at an annual rate of 25% between 1988 and 1991 to reach revenue of $4 million.

- The operations of The Strifler Group have been merged into SHL's Central Region based in Dallas.

ComputerLand Canada was acquired by SHL in late fiscal 1988 and ComputerGroup was acquired in August 1989.

Employees

As of August 31, 1992, SHL had 3,607 employees (generating $204,774 in revenue per employee). Of these employees, approximately 932 work for ComputerLand Canada.

Competitors

SHL's competitors by delivery mode are as follows:

- Systems integration and outsourcing: IBM, EDS, CSC, and the Big Six accounting firms.

- ComputerLand Canada: Dealers such as Crowntek Business Centres, Hamilton Group, and smaller microcomputer and local-area network vendors. In addition, ComputerLand Canada increasingly competes with ISM Information Systems Management, EDS of Canada Limited, Digital Equipment of Canada Limited, and with other domestic and foreign manufacturers that sell directly to the end user.

Copyright 1993 by INPUT. Reproduction Prohibited.

Key Products and Services

SHL management states that 100% of the company's fiscal 1992 revenue was derived from systems integration and outsourcing activities. Approximately 58% of revenue came from hardware and software sales, 37% from professional services, and 5% from systems operations.

During 1992, within SHL's transformational outsourcing framework, the company redirected its operations along three lines of business.

- Systems Integration and Consulting focuses on implementing client/server architectures and open systems for a worldwide clientele. SHL's resources are united in this area by its proprietary methodology, Systems Integration Life Cycle (SILC), which is used to develop and implement all systems integration projects. SILC includes the software development life cycle, project management, strategic planning, facilities engineering, quality assurance, architecture definition, and capacity planning.

- Technology Deployment makes use of SHL's expertise in advanced open systems technologies--from local-area networks and workstations to wide-area networks--to provide education and training, technology configuration and distribution, and maintenance and help services in support of system reconfigurations.

- Systems Operations and Outsourcing is supported through SHL's Computing and Network Services business unit, four regional service centers, and wide-area network facilities.

SHL's base of business over the past year has shifted from short-term contracts with higher risk profiles to long-term contracts with higher profit profiles.

Systems integration contract examples include the following:

- Providing a statewide Child Support Enforcement system to the State of Louisiana Department of Social Services under a $6.8 million - $7.8 million contract. The system is based on a system originally developed by SHL for Kansas. In addition to Louisiana and Kansas, there are 11 states and the District of Columbia using SHL systems to automate their human services administration.

- Providing business systems integration services together with IBM Canada Ltd. for Husky Oil, Ltd.

- Acting as prime contractor and systems integrator to replace Transport Canada's financial and inventory control systems under a contract valued at more than $60 million.

Copyright 1993 by INPUT. Reproduction Prohibited.

- Working with the Taco Bell Corp. and KFC Corporation restaurant chains of PepsiCo to develop next generation point-of-sale computer automation systems for their quick service restaurants.

- Providing and operating a tracking, tracing, and inquiry service of postal mail for the U.S. Postal Service under an 11-year, $270 million systems integration contract awarded in February 1991. The base contract, which covers the first five years of the agreement, is valued at $128 million. The succeeding two option periods are expected to total $142 million.

Systems operations contracts include the following:

- A multiyear transformational outsourcing pact with Computerland Corp. whereby SHL will take over Computerland's mainframe processing and migrate it to a client/server environment.

- A three-year transformational processing contract to manage National Education Corporation's mainframe computer systems, and network and project management support for a rightsizing project toward distributed computing.

- A supercomputer processing and network operations contract with HPC High Performance Computing, a Canadian supercomputing consortium.

- Computer systems outsourcing contracts valued at over $100 million over 7 years with the privately-owned Maritime Telegraph & Telephone Company and the Government of Nova Scotia.

- A five-year transformational outsourcing contract with Amoco Canada Petroleum Ltd., valued at $70 to $90 million, to provide all mainframe processing and data, voice, and radio network operations.

Contract examples for transformational services include the following:

- A $550 million (U.S.) contract to build and manage tax and customs systems for the Government of Mexico's Finance Ministry in joint venture with Gervassi Clark S.A. de C.V., a Mexican computer systems management company. SHL established Systemhouse de Mexico, S.A. de C.V., a wholly owned subsidiary, in Mexico City.

- A five-year outsourcing contract with Browning-Ferris Industries (BFI) for the Application Systems and Development and Support group within BFI's MIS Department. SHL is responsible for development and maintenance of more than 40 application systems.

Copyright 1993 by INPUT. Reproduction Prohibited.

- A contract for the design phase of two major Canadian Federal government systems initiatives valued in excess of $200 million each when awarded--the Canadian Forces Supply System Upgrade and the income Security Programs Redesign.

- A contract for the first phase design of a $250 million Income Security Programs Redesign for Health and Welfare Canada.

ComputerLand Canada, with approximately 930 employees, operates solely in Canada through 42 Business Solution, Service, and Training Centres in 32 cities. Fiscal 1992 revenue is estimated at $350 million.

- ComputerLand Canada markets and supports third-party microcomputer hardware and software products for workstation-based networks, and provides related desktop systems management services to business, government, and education.

- Its business involves assessing and defining customer requirements, recommending the best products and services, developing an effective implementation plan, pre- and post-delivery configuration; delivery, installation, and testing of the LAN-based products, initial training of customer personnel, and after-sale support in the form of remote systems management, ongoing user training, product warranty, and maintenance services.

- ComputerLand Canada is currently an authorized dealer for IBM, Hewlett-Packard, Compaq, Apple, Sun, NEC, and Toshiba, among others, and obtains a variety of equipment from other suppliers to meet its customers' requirements. Leading software lines include products from Lotus, Microsoft, and Borland.

- ComputerLand's Technical Services Division, with over 400 field personnel in 40 service centers across Canada, provides hardware maintenance and support services.

SHL Systemhouse Europe, with approximately 500 employees, provides systems integration and consulting, computing and network services, and technology deployment services in the U.K. and continental Europe.

Industry Markets

SHL's target markets are defined by its eight Strategic Market Units--Postal, Telecommunications, Public Safety, Energy, Human Services, Insurance, Financial Services, and Logistics (focusing on retailing, manufacturing, and consumer products).

Copyright 1993 by INPUT. Reproduction Prohibited.

- Ministries, departments, and crown corporations of the Canadian federal government generated revenues of approximately $30.9 million (4% of revenue) in fiscal 1992, compared to $36.6 million (5% of revenue) in fiscal 1991, and $44.1 million (6% of revenue) in fiscal 1990.

- Revenue from the U.S. federal government and its agencies were approximately $42.4 million (6% of revenue) in fiscal 1992, $36.8 million (5% of revenue) in fiscal 1991, and $33.3 million (5% of total revenue) in fiscal 1990.

SHL provides systems integration services and outsourcing primarily in Canada, the U.S., and Europe to government and commercial organizations.

- In Canada, SHL customers come from a range of industrial, commercial, and government sectors, including financial services, resources, utilities, wholesale/retail, transportation, manufacturing, communications, and municipal, provincial, and federal government.

- In the U.S., SHL customers include telecommunications manufacturers and services providers, transportation, retail, and financial services organizations, and state and local governments.

- In Europe, clients include United Nations agencies, governments, and commercial organizations.

Commercial clients include Debenham's Stores, Financial Times, Lloyds Bank, and the National Home Loan Corporation.

ComputerLand Canada's current customer base, in terms of annual dollar sales volume, is approximately as follows:

Small/medium business acounts (10-500 employees)	26%
Large business accounts (over 500 employees)	60%
Federal, provincial, and municipal governments and their agencies	12%
Education (universities, community colleges, and school boards)	1%
Other	1%
	100%

Geographic Markets

Approximately 64% of SHL's fiscal 1992 revenue was derived from Canada, 18% from the U.S., and 18% from Europe and Latin America. A three-year geographic financial summary follows:

Copyright 1993 by INPUT. Reproduction Prohibited.

SHL SYSTEMHOUSE INC.
THREE-YEAR GEOGRAPHIC FINANCIAL SUMMARY
($ millions)

	FISCAL YEAR					
	8/92		8/91		8/90	
ITEM	$	PERCENT OF TOTAL	$	PERCENT OF TOTAL	$	PERCENT OF TOTAL
Revenue						
- Canada	$470.6	64%	$456.6	66%	$508.8	74%
- U.S.	135.1	18%	112.5	16%	94.4	14%
- Europe (a)	133.6	18%	119.8	17%	86.0	12%
- (Eliminations)	(0.7)	--	--	--	--	--
	$738.6	100%	$688.9	100%	$689.2	100%
Operating profit (loss) (b)						
- Canada	$12.5	184%	$16.9	65%	$17.7	131%
- U.S.	(4.5)	(66%)	6.0	23%	(5.7)	(42%)
- Europe (a)	(1.4)	(21%)	3.2	12%	1.5	11%
- Eliminations	0.2	3%	--	--	--	--
	$6.8	100%	$26.1	100%	$13.5	100%

(a) Before corporate items.

(b) Fiscal 1992 results include Latin American operations.

SHL's Canada/Pacific SAU is organized into five regions--Ottawa/Atlantic (Ottawa and Halifax offices), Quebec (Quebec City and Montreal offices), Ontario (Toronto office), Western (Winnipeg, Regina, Calgary, and Edmonton offices), and Pacific (including Vancouver and Victoria offices and the Pacific Rim). ComputerLand Canada operates throughout Canada and is considered part of this SAU.

U.S./Mexico/Central and South America includes the following regions:

- The U.S. SAU is divided into eight regions--Northeast (New York office), Mid Atlantic (Arlington and Baltimore offices), Southeast (Orlando office), West (Dallas and Houston offices), Mideast (Chicago office), Pacific South (Los Angeles office), Mid-Pacific (Sacramento and San Francisco offices, and Pacific Northwest.

- Responsibility for expanding operations in Mexico, and Central and South America resides the Executive Vice-President of the Central Region. Systemhouse de Mexico S.A. de C.V.has an office in Mexico City from which it carries on operations in Mexico.

Copyright 1993 by INPUT. Reproduction Prohibited.

- Systemhouse de Sur America, S.A. is a wholly owned subsidiary with an office in Caracas that conducts business locally and pursues selected opportunities in Central and South America.

SHL's Europe SAU is divided into three U.K. regions and continental European operations--Northern Region (Glasgow, Newcastle, Leeds, Manchester, and Liverpool offices), Midlands Region (Nottingham, Birmingham, Milton Keynes, Bristol, and Exeter offices), Southern Region (London and Camberley offices), and Continental Europe (Geneva office).

ComputerLand Canada operates 42 Business Solution, Service, and Training Centres in 32 cities across Canada.

Copyright 1993 by INPUT. Reproduction Prohibited.

SHL SYSTEMHOUSE INC.
50 O'Connor Street
5th Floor
Ottawa, Ontario, Canada
K1P 6L2
(613) 236-9734

Roderick M. Bryden, Chairman and CEO
Peter Sandiford, President and COO
Listed on NASDAQ, Toronto Stock Exchange, Montreal Exchange
Total Employees: 3,057 (1/91)
Total Revenue, Fiscal Year End 8/31/90: $689,240,000 ($ Cdn.)*

*All financial information is expressed in Canadian dollars unless otherwise stated

The Company

SHL Systemhouse Inc., founded in 1974, provides systems integration, professional services, and systems operations to commercial and government clients in Canada, Europe, and the U.S. The company also provides microcomputer hardware and software integration services through its ComputerLand Canada and ComputerGroup (U.K.) subsidiaries.

- ComputerLand Canada was acquired by Systemhouse in late fiscal 1988 and ComputerGroup was acquired in August 1989.
- In December 1989, Systemhouse also acquired an outsourcing data center in Houston (TX) from ITEL Rail. Systemhouse's Johnstown (PA) data center operations have been consolidated into the Houston data center.

Kinburn Technology Corporation (KTC), a subsidiary of Kinburn Corporation, was previously the majority owner of Systemhouse. On March 12, 1990, Kinburn Corporation announced that it was unable to meet its $700 million debt. KTC has offered its 50.1% interest in Systemhouse. As of April 1, 1991, the ownership issue is unresolved. Kinburn's stake in Systemhouse is now controlled by BCE Inc. (Northern Telecom's and Bell Canada's parent), with a 25% share, and by a syndicate of Canadian banks, with a 30% share.

Systemhouse's total fiscal 1990 revenue reached $689.2 million, a 9% increase over fiscal 1989 revenue of $630.8 million.

- Net losses of $37.6 million for fiscal 1990 include unusual expenses of $35.6 million relating primarily to a goodwill

Copyright 1991 by INPUT. Reproduction Prohibited.

reduction of $20.1 million and a restructuring provision of $4.9 million related to Systemhouse's decision to narrow its focus to specific niches within the U.S. federal government market and because of a $9.7 million provision for accounts receivable due from Kinburn Technology Corporation and certain affiliates.

SHL SYSTEMHOUSE INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, Canadian)

	FISCAL YEAR				
ITEM	8/90	8/89	8/88	8/87	8/86
Revenue	$689.2	$630.8	$230.1	$168.5	$102.1
• Percent increase from previous year	9%	174%	37%	65%	110%
Operating revenue (a)	$247.4	$232.3	$123.0	$97.3	$56.1
Income (loss) before taxes	$(37.6) (b)	$19.2	$7.3	$23.9	$10.1
• Percent increase (decrease) from previous year	(296%)	163%	(69%)	137%	N/A
• Gross margin	--	3%	3%	14%	10%
Net income (loss) (c)	$(40.6)	$15.3	$5.8	$23.7	$10.1
• Percent increase (decrease) from previous year	(365%)	164%	(76%)	135%	12%
• Net margin	--	2%	3%	14%	10%

(a) Represents total revenue less the cost of hardware and licensed software sold.

(b) Includes unusual charges of $35.6 million resulting from writedowns and reductions in goodwill.

(c) Includes credits of $3.0 million, $2.1 million, $11.4 million, and $5.2 million for fiscal 1989, 1988, 1987, and 1986, respectively, related to the recovery of unrecorded tax loss carryforwards.

Revenues over the last three years have been impacted significantly by the acquisitions of ComputerLand Canada late in fiscal 1988 and ComputerGroup at the end of fiscal 1989.

- Revenues for fiscal 1990 were lower than anticipated due primarily to a general economic slowdown in the computer industry and, in the fourth quarter, from confusion among customers surrounding the Kinburn financial difficulties.

Copyright 1991 by INPUT. Reproduction Prohibited.

- Revenues also reflected the conclusion of Systemhouse's two-year reduction program in its federal government business, including further steps taken in the second quarter of fiscal 1990 to limit its activities to identified strengths. Revenues from U.S. federal government business declined significantly during fiscal 1990 to $33.3 million, from $82.3 million in fiscal 1989, and $66.0 million in fiscal 1988.

- Operating revenue margins were 36% in fiscal 1990, 37% in 1989, and 53% in 1988. This decrease is primarily due to the larger component of hardware in the microcomputer systems integration business which became a more significant portion of total company revenue with the acquisitions of ComputerLand Canada and Computergroup. Increased competitive pressures created by the general economic slowdown in the computer industry also had a downward pressure on margins.

Preliminary results indicated revenue for the six months ending February 28, 1991 reached $357 million, compared to $347 million for the same period a year ago. Net income before interest and taxes will be $12.1 million, compared with $5.3 million for the first half of last year.

Systemhouse has supplier agreements with many hardware and software vendors - including IBM, DEC, Sun Microsystems, and Northern Telecom.

Systemhouse has strategic alliances with ComputerLand U.S., Pansophic Systems, and Ingres (ASK Computer).

As of August 31, 1990, Systemhouse had 3,057 employees (generating $225,463 in revenue per employee) segmented as follows:

EMPLOYEE CATEGORY	NUMBER	PERCENT OF TOTAL
Marketing and sales	520	17%
Customer support	2,221	73%
General and administrative	316	10%
TOTAL	**3,057**	**100%**

Systemhouse's competitors by delivery mode are as follows:

- Systems integration: EDS, CSC, and the Big Six accounting firms.

Copyright 1991 by INPUT. Reproduction Prohibited.

- ComputerLand Canada: Dealers such as MCW-Crowntek and smaller microcomputer and local-area network vendors. IBM is a competitor in certain markets, as are other domestic and foreign manufacturers who sell directly to the end user.

Key Products and Services

Systemhouse management states that 100% of the company's fiscal 1990 revenue was derived from systems integration activities, of which 64% was derived from hardware and software sales (90% from hardware and 10% from packaged software), 31% from professional services, and 5% from systems operations.

Systemhouse uses a proprietary methodology, Systems Integration Life Cycle (SILC), to develop and implement all systems integration projects. SILC includes not only the software development life cycle, but also project management, strategic planning, facilities engineering, quality assurance, architecture definition, and capacity planning.

In February 1991, Systemhouse (Arlington, VA) was awarded a major systems integration contract with the U.S. Postal Service. Under the $270 million, 11-year contract, Systemhouse will provide and operate a tracking, tracing, and inquiry service of postal mail. The base contract, which covers the first five years of the agreement, is valued at $128 million. The succeeding two option periods are expected to total $142 million

- Systemhouse will design, develop, and implement software to manage and control the entire tracking and tracing application. The system includes scanning devices in 16,000 postal locations, transmitting information as the mail pieces are received at each facility. Subsequently, an 800 inquiry service will provide the status of each transaction to the customers of the Postal Service.

- Systemhouse also leads a team of companies providing expertise in various critical areas of this program, including IBM, American Airlines Direct Marketing Corporation, Symbol Technologies, Unisys, and Learning Systems International.

Other contract examples for systems integration include the following:

- Two contracts totalling $20.7 million (U.S.) by the state of Maryland Department of Human Resources to develop and implement Maryland's Client Data Base, the Client's Automated Resource and Eligibility System, and the Child Support Enforcement System.

Copyright 1991 by INPUT. Reproduction Prohibited.

- A $6 million (U.S.) contract from the Los Angeles County Superior Court to design a single system to accommodate the case management and processing needs of both criminal and civil courts.

- A $4.2 million (U.S.) contract to provide computer systems and integration services for a new marine terminal at the Port of Los Angeles owned by NYK of Tokyo. The systems will handle terminal control, inventory, yard and vessel planning, and decision support applications in support of the management of container traffic, including in- and outbound trucks and vessels, scheduling and ship loading.

- A $16 million contract with the Los Angeles Fire Department for its Fire Command and Control System (FCCS II). The system links IBM PS/2 workstations at 104 fire stations and Motorola KDT mobile terminals in over 400 trucks into a fault-tolerant system using Token Ring technology.

- The installation of hardware, software, and communications as part of the Naval Avionics Center's (NAC) Distributed Corporate Computing Facility. The DEC-based system uses VAX 8800s with satellite 8500s networked on an Ethernet LAN and interfacing to NAC's TCP/IP LAN. The system will assist Naval Avionics as it provides design, engineering support, prototyping, and production facilities in the acquisition of advanced electronics for U.S. Navy aircraft.

Systemhouse provides a range of services including performance analysis and system tuning, integration of vendor hardware upgrades and software releases, telecommunications network management, and contingency planning and disaster recovery. Systemhouse provides all aspects of systems operations. Contract pricing can either be fixed or transaction based. The system can be operated either at the client site or at a Systemhouse location.

Contract examples for professional services include the following:

- For Sacramento County (CA), which is one of the fastest growing regions in the U.S., Systemhouse has completed a long-range systems plan for the adoption of new countywide technologies.

- Systemhouse documented the information technology requirements for ABB British Wheelset, a Manchester-based manufacturer of railway wheels and industrial rings. The subsequent architecture definition resulted in the selection of

Copyright 1991 by INPUT. Reproduction Prohibited.

integrated manufacturing and accounting software in an HP 9000 hardware environment.

- For the Quebec Ministry of Environment, Systemhouse designed and later implemented a data base management system for industrial pollution sources in the province. Interfacing with other authorities, the system is designed to help enforce government regulations and reduce industrial waste.

- As part of the Information Technology Strategy development effort by the Guinness Group of Companies, Systemhouse U.K. performed an in-depth review of the Office Systems Technology. The study provided an inventory of the current office systems technologies and recommended technology solutions and implementation strategy. Using its SILC methodology, Systemhouse focused on office systems within the larger context of the total information system environment across the Guinness Group of Companies.

- Systemhouse participated in a telecommunications needs analysis and strategic plan and developed a long-range systems implementation plan for the Health Department, Province of Quebec. The study examined telecommunications and connectivity requirements for a 900-site network involving mainframes, minicomputers, and LANs. Systemhouse examined cost benefits of different commercial communications facilities, and presented a long-range implementation strategy.

- For Canadian Hunter Exploration Ltd., Systemhouse created a five-year information systems plan for the IS organization, including defining the data elements, applications, communications, and equipment.

Contract examples for systems operations include the following:

- A $3.5 million contract with Pneumo Abex (PA) Corporation to provide processing services to three PA aerospace divisions for payroll, financial, manufacturing, and inventory processes, as well as data communications network management.

- A $32.5 million (U.S.) subcontract with Spectrum Healthcare Solutions to provide computer hardware, systems software, communications facilities, a central data center, and ongoing systems operations services for the Hospital Financial Information System being implemented at six Los Angeles County-owned and operated hospitals.

- A $13.9 million (U.S.), five-year subcontract from Native

Copyright 1991 by INPUT. Reproduction Prohibited.

American Consulting Inc. to provide data processing and network management services to the U.S. Treasury Department. Systemhouse will provide computer resources and programming support from its Houston Outsourcing Center to process all data for the Treasury Payroll Information System, which supports approximately 55,000 government employees.

- Systemhouse has assumed responsibility for operation of First City Trust Co.'s Vancouver data center. By 1992, First City will have migrated to a totally distributed operating environment for its North American offices.

ComputerLand Canada, with over 1,000 employees in 65 locations, generated revenue of $435 million in fiscal 1990 and has grown over 300% in the last five years.

- ComputerLand Canada markets and supports third-party microcomputer hardware and software products. Support services include analysis, systems engineering, implementation, and post-installation support.

- All ComputerLand sales teams include systems engineers who have been trained as specialists on UNIX products, local and wide area networks, and proprietary and standard operating systems, as well as software and system design and network management. These engineers design and install some 3,000 local- and wide-area networks each year.

- During fiscal 1990, ComputerLand Canada also trained over 50,000 people, either at customer sites or in ComputerLand Learning Centers located in 21 cities across Canada.

- ComputerLand's Technical Services Division, with over 400 field personnel in 40 service centers across Canada, provides hardware maintenance and support services.

ComputerGroup is a leading U.K. desktop systems integrator, providing engineering, implementation, and associated support services for networked systems. ComputerGroup has approximately 480 employees and generated revenue of $80 million in fiscal 1990.

Industry Markets

Systemhouse targets the federal government, state and local government, banking/financial, medical, insurance, manufacturing, telecommunications, retail, transportation, utilities, and distribution industries.

Copyright 1991 by INPUT. Reproduction Prohibited.

- Ministries and departments of the Canadian Federal Government, as well as crown corporations, are the largest customers of Systemhouse, generating revenues of approximately $44.1 million (6% of revenue) in fiscal 1990, compared to $49.7 million (8% of revenue) in fiscal 1989, and $21.4 million (9% of revenue) in fiscal 1988.

- Revenues from U.S. federal government clients were approximately $33.3 million (5% of total revenue) in fiscal 1990, $82.3 million (13% of revenue) in fiscal 1989, and $66.0 million (29% of revenue) in fiscal 1988.

Systemhouse provides systems integration services primarily in Canada, the U.S., and Europe to government and commercial organizations.

- In Canada, Systemhouse customers come from a range of industrial, commercial, and government sectors, including financial services, resources, utilities, wholesale/retail, transportation, manufacturing, communications, and municipal, provincial, and federal government.

- In the U.S., Systemhouse customers include state and local governments, telecommunications manufacturers and services providers, and transportation, retail, and financial services organizations.

- In Europe, clients include United Nations agencies, governments, and commercial organizations.

Commercial clients include Debenham's Stores, Financial Times, Lloyds Bank, and the National Home Loan Corporation.

ComputerLand Canada and ComputerGroup's current customer base, in terms of annual dollar sales volume, is estimated as follows:

Small/Medium Business Accounts (10-500 employees)	41%
Large Business Accounts (over 500 employees)	38%
Federal, Provincial, and Municipal Governments and their agencies	8%
Education (Universities, Community Colleges, and School Boards)	3%
Other	10%
	100%

Copyright 1991 by INPUT. Reproduction Prohibited.

Geographic Markets

Approximately 74% of Systemhouse's fiscal 1990 revenue was derived from Canada, 14% from the U.S., and 12% from Europe. A three-year geographic financial summary follows:

SHL SYSTEMHOUSE INC.
THREE-YEAR GEOGRAPHIC FINANCIAL SUMMARY
($ millions, Canadian)

	FISCAL YEAR					
	8/90		8/89		8/88	
ITEM	$	PERCENT OF TOTAL	$	PERCENT OF TOTAL	$	PERCENT OF TOTAL
Revenue						
- Canada	$508.8	74%	$497.6	79%	$116.0	50%
- U.S.	94.4	14%	131.2	21%	111.3	49%
- Europe	86.1	12%	2.0	–	2.8	1%
	$689.2	100%	$630.8	100%	$230.1	100%
Operating profit (a)						
- Canada	$17.7	131%	$41.3	102%	$9.0	159%
- U.S.	(5.7)	(42%)	(1.2)	(3%)	(3.9)	(69%)
- Europe	1.5	11%	0.5	1%	0.6	10%
	$13.5	100%	$40.6	100%	$5.7	100%

(a) Before corporate items.

Systemhouse operates Canadian branch offices located in Ontario (2), British Columbia, Alberta (2), Manitoba, Nova Scotia, Quebec, and Saskatchewan.

Systemhouse has U.S. offices located in Arlington (VA); San Francisco, Cerritos, and Sacramento (CA); Chicago (IL); Houston (TX); and Baltimore (MD).

Systemhouse has European offices in England and Switzerland.

In addition, ComputerLand Canada operates 60 Business Solution Centers in over 45 cities across Canada, and ComputerGroup owns and operates 16 ComputerLand System Centres throughout the U.K.

Copyright 1991 by INPUT. Reproduction Prohibited.

SHL SYSTEMHOUSE INC.
50 O'Connor Street
5th Floor
Ottawa, Ontario, Canada
K1P 6L2
(613) 236-9734

Roderick M. Bryden, Chairman and CEO
Peter Sandiford, President and COO
Subsidiary of Kinburn Technology Corporation
Listed on NASDAQ, Toronto Stock Exchange, Montreal Exchange
Total Employees: 3,104 (3/90)
Total Revenue, Fiscal Year End 8/31/89: $530,399,000*

*All financial information is expressed in U.S. dollars unless otherwise stated.

The Company

SHL Systemhouse Inc., founded in 1974, provides systems integration, professional services, and systems operations to commercial and government clients. The company also sells microcomputer hardware and software through its ComputerLand Canada subsidiary. Systemhouse is currently owned by Kinburn Technology Corporation (KTC), a subsidiary of Kinburn Corporation.

On March 12, 1990, Kinburn Corporation announced that it was unable to meet its $700 million debt. KTC has offered up its 50.1% interest in Systemhouse. BCE Inc. (Northern Telecom's and Bell Canada's parent) is considering a bid for Systemhouse.

Systemhouse's total fiscal 1989 revenue reached $530.4 million, a 183% increase over fiscal 1988 revenue of $187.7 million. Information services revenue for fiscal 1989 was $514.3 million. Net income rose 174%, from $4.7 million in fiscal 1988 to $12.9 million in fiscal 1989. A five-year financial summary follows:

Copyright 1990 by INPUT. Reproduction Prohibited.

SHL SYSTEMHOUSE INC.
FIVE-YEAR FINANCIAL SUMMARY (a)
($ millions)

ITEM	FISCAL YEAR 8/89	8/88	8/87	8/86	8/85	CAGR
Total revenue	$530.4	$187.7	$127.5	$73.4	$35.6	96.5%
• Percent increase from previous year	183%	47%	74%	106%	28%	
Income before taxes	$16.1	$6.0	$18.1	$7.2	$6.6	25.0%
• Percent increase from previous year	168%	(67%)	151%	9%	267%	
• Gross margin	3%	3%	14%	10%	19%	
Net income	$12.9	$4.7	$18.0	$7.2	$6.6	18.2%
• Percent increase from previous year	174%	(74%)	150%	9%	267%	
• Net margin	2%	3%	14%	10%	19%	

(a) The following Canadian/U.S. exchange rates were used: 8/89 $1 (CAN) = $0.8408 (U.S.); 8/88 $1 (CAN) = $0.8155 (U.S.); 8/87 $1 (CAN) = $0.7563 (U.S.); 8/86 $1 (CAN) = $0.7188 (U.S.); 8/85 $1 (CAN) = $0.7308 (U.S.); 8/84 $1 (CAN) = $0.7713 (U.S.)

The large growth in revenue is attributed to the inclusion of operations from ComputerLand Canada for the full year and a growth in the systems integration services. Systemhouse expects a growth of approximately 25% on combined revenues in fiscal 1990.

Revenue for the nine months ending May 31, 1990 was $459.2 million [$1 (CAN) = $0.87 (U.S.)], a 12% increase from $410.0 million [$1 (CAN) = $0.84 (U.S.)] for the same period in 1989. Net income for the period declined from $10.0 million to a loss of $24.8 million. Systemhouse attributes the decline to project start-up delays, project overruns, and increased operating and administrative expenses.

Recent acquisitions include the following:

- The acquisition of ComputerGroup plc, the largest ComputerLand franchise in the United Kingdom, in August 1989. Its business and structure is very similar to that of ComputerLand Canada, and, as such, will be under the direction of the President of ComputerLand Canada.

- The acquisition of ComputerLand Canada in 1988. The company sells and integrates microcomputer products and

Copyright 1990 by INPUT. Reproduction Prohibited.

related services which address the information processing needs of business, government, and education.

Systemhouse has supplier agreements with many hardware and software vendors including IBM, Digital Equipment Corporation, Sun Microsystems, and Northern Telecom.

Systemhouse has a strategic alliance with ComputerLand U.S.

As of August 31, 1989, Systemhouse had 2,761 employees, segmented as follows:

Employee Category	Number	Percent	Revenue Per Person
Marketing and sales	414	15%	--
Customer support	2071	75%	--
General and administrative	276	10%	--
TOTAL	2,761	100%	$192,104

Systemhouse's competitors by delivery mode are as follows:

- Systems integration: EDS, Andersen Consulting, and CSC.
- ComputerLand Canada: Dealers such as MCW-Crowntek and smaller microcomputer and local-area network vendors. Also, IBM in certain markets and with other domestic and foreign manufacturers who sell directly to the end user.

Key Products and Services

Systemhouse management states that approximately 64% of the company's fiscal 1989 revenue was derived from systems integration, 20% from professional services, 10% from systems operations, 3% from packaged software sales, and 3% from hardware sales.

Systemhouse uses a proprietary methodology, Systems Integration Life Cycle (SILC), to develop and implement all systems integration projects. SILC includes not only the software development life cycle, but also project management, strategic planning, facilities engineering, quality assurance, architecture definition, and capacity planning.

Copyright 1990 by INPUT. Reproduction Prohibited.

Contract examples for systems integration include the following:

- A joint venture with Ameritech Information Systems in developing a $25 million integrated public-safety communications system for the Metropolitan Emergency Communications Agency (MECA) of Marion County, IN. The two companies will handle the system's design, specification, hardware and software development and testing, vendor bid reviews and recommendations, training, and installation.

- A $16 million contract with the Los Angeles Fire Department for its Fire Command and Control System (FCCS II). The system links IBM PS/2 workstations at 104 fire stations and Motorola KDT mobile terminals in over 400 trucks into a fault-tolerant system using Token Ring technology.

- The installation of hardware, software, and communications as part of the Naval Avionics Center's (NAC) Distributed Corporate Computing Facility. The DEC-based system uses VAX 8800s with satellite 8500s networked on an Ethernet LAN and interfacing to NAC's TCP/IP LAN. The system will assist Naval Avionics as it provides design, engineering support, prototyping, and production facilities in the acquisition of advanced electronics for U.S. Navy aircraft.

Systemhouse provides a range of services including performance analysis and system tuning, integration of vendor hardware upgrades and software releases, telecommunications network management, and contingency planning and disaster recovery. Systemhouse provides all aspects of systems operations. Contract pricing can either be fixed or transaction based. The system can be operated either at the client site or at a Systemhouse location.

Contract examples for professional services include the following:

- As part of the Information Technology Strategy development effort by the Guinness Group of Companies, Systemhouse U.K. performed an in-depth review of the Office Systems Technology. The study provided an inventory of the current office systems technologies and recommended technology solutions and implementation strategy. Using their SILC methodology, Systemhouse focused on office systems within the larger context of the total information system environment across the Guinness Group of Companies.

- Systemhouse participated in a telecommunications needs analysis and strategic plan and developed a long-range systems implementation plan for the Health Department, Province of

Copyright 1990 by INPUT. Reproduction Prohibited.

Quebec. The study examined telecommunications and connectivity requirements for a 900-site network involving mainframe, minicomputers, and LANs. Systemhouse examined cost benefits of different commercial communications facilities, and presented a long-range implementation strategy.

- For Canadian Hunter Exploration Ltd, the creation of a five-year information systems plan for the IS organization including defining the data elements, applications, communications, and equipment.

Contract examples for systems operations include the following:

- Systemhouse has assumed responsibility for operation of First City Trust Co.'s Vancouver data center. By 1992, First City will have migrated to a totally distributed operating environment for their North American offices.

- A $5.2 million contract to supply ITEL Rail Corporation with system development and integration services. As part of the agreement, Systemhouse will purchase Signal Capital Computer Corporation (SCCC), a subsidiary of ITEL Rail's parent, ITEL Corporation. SCCC operates the IBM-based computer facility serving ITEL Rail and other commercial clients. Systemhouse will continue to provide the existing SCCC client base with data processing services, gaining an additional $5 million in annual revenue.

- A $17 million contract to design, develop, integrate and, for a five-year period, operate the GAIN Employment Activity Reporting System (GEARS) for the County of Los Angeles Department of Public Social Services. GEARS will track a caseload of up to 100,000 clients and perform 12 million transactions per year.

Over-the-counter sales of software and hardware are made through the ComputerLand Canada stores.

Industry Markets

Systemhouse targets federal government, state and local governments, banking/financial, medical, insurance, manufacturing, telecommunications, retail, transportation, utilities, and distribution.

Agencies of the U.S. federal government represent Systemhouse's largest customer, generating $82.3 million (13%) of the total fiscal 1989 revenue. Of this revenue, 40% is derived from civilian agencies and 60% from defense agencies. The ministries and

Copyright 1990 by INPUT. Reproduction Prohibited.

departments of the federal government of Canada generated revenue of $49.7 million (8%) of the total fiscal 1989 revenue.

Commercial clients include Rank Xerox, Lloyds Bank, Shell Chemicals, and the National Home Loan Corporation.

ComputerLand Canada's current customer base, in terms of annual dollar sales volume, is as follows:

Small/Medium Business Accounts (10-500 employees)	41%
Large Business Accounts (over 500 employees)	38%
Federal, Provincial, and Municipal Governments and their agencies	8%
Education (Universities, Community Colleges, and School Boards)	3%
Other	10%
	100%

Geographic Markets

Approximately 79% of Systemhouse's fiscal 1989 revenue was derived from Canada, 20% from the U.S., and 1% from other international sources.

Systemhouse has Canadian offices located in Ontario, British Columbia, Alberta, Manitoba, Nova Scotia, Quebec, and Saskatchewan.

Systemhouse has U.S. offices located in Arlington (VA); San Francisco, Cerritos, and Sacramento (CA); Houston (TX); Baltimore (MD); and Rosemont (IL).

Systemhouse has European offices in Switzerland and England.

Copyright 1990 by INPUT. Reproduction Prohibited.

SPSS INC.
444 North Michigan Avenue
Chicago, IL 60611
(312) 329-2400

Norman H. Nie, President and CEO
Private Corporation
Total Employees: 233
Total Revenue, Fiscal Year End 12/31/90: $34,000,000*

*Preliminary results

The Company

SPSS Inc., incorporated in 1975, provides software products for statistical analysis, data entry, data management, and presentation graphics applications. The company's SPSS[R] product line currently has more than 2 million users worldwide.

The mission statement of SPSS is "to provide software and services worldwide for translating data into information that is useful for people who are involved in research and decision making."

- The company has more than 20 years of experience in producing statistical data analysis tools for a variety of applications, including business, market research, personnel, health care, manufacturing, education, and government.

- SPSS products are available for every major new platform in the industry--including OS/2, Macintosh, and UNIX workstations--and the company is continually enhancing its DOS-based product.

In November 1990, SPSS announced a significant new investment in its business by several major financial institutions led by Morgan Stanley Venture Capital Fund L.P.

- The funds will be used to launch a major development effort to produce a new generation of highly interactive statistical software products for graphical environments, a family of applied statistics products for nonstatisticians, upgrades to existing products, and enhanced customer support activities.

- The investment involved an estimated 30% of SPSS, with SPSS' senior management team remaining the largest equity holder in the company.

SPSS' 1990 revenue reached $34 million, a 13% increase over 1989 revenue of $30 million. A five-year revenue summary follows:

Copyright 1991 by INPUT. Reproduction Prohibited.

SPSS INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	1990	1989	1988	1987	1986
Revenue	$34.0	$30.0	$29.5	$26.0	$23.0
• Percent increase from previous year	13%	2%	13%	13%	N/A

The company has had an annual compound growth rate of 25% during the past 10 years.

As of January 1991, SPSS had 233 employees worldwide, segmented as follows:

North America	165
Europe	60
Asia	8
	233

SPSS' major competitor is SAS Institute.

Key Products and Services

Approximately 88% ($30 million) of SPSS' 1990 revenue was derived from software products and the remaining 12% ($4 million) from publications, training, and support services.

Mainframe, Minicomputer, and Workstation Products:

SPSS is a statistical data analysis system used for a range of statistical applications. The package contains more than 50 statistical procedures, on-line help, a statistical glossary, and extensive data management capabilities.

Options for SPSS include SPSS Categories™, for conjoint analysis and optimal scaling; LISREL™, which analyzes linear structural models or simultaneous equation models; SPSS Data Entry II™, for data entry, editing, and customizing screens; SPSS Tables™, for creating publication-ready reports; and SPSS Trends™, for forecasting and time series analysis.

SPSS Graphics, released in 1985, is a full-featured package, with over 40 different formats, for producing presentation-quality

Copyright 1991 by INPUT. Reproduction Prohibited.

graphs and maps. It can function as a standalone program or as an option to SPSS.

SPSS software operates on most major computers, include Apple, Control Data, Cray, Data General, DEC, Hewlett-Packard, Honeywell, IBM, Prime, Sun Microsystems, Unisys, and Wang systems.

Products for Microcomputers:

SPSS/PC+™, introduced in 1984, is the company's statistical data analysis system for microcomputers. The package currently has well over 200,000 users worldwide.

- During 1990, SPSS/PC+ was repackaged to provide users with more flexibility in choosing the best set of data analysis modules to fit their applications. SPSS/PC+ modules include the following:
 - SPSS/PC+ Base includes data and file management, basic statistical procedures, and Graph-in-the-Box (from New England Software).
 - SPSS/PC+ Statistics™
 - SPSS/PC+ Advanced Statistics™
 - SPSS/PC+ Categories™
 - SPSS/PC+ CHAID™
 - SPSS/PC+ Graphics™ featuring Harvard Graphics
 - SPSS/PC+ Map™ from MapInfo
 - SPSS/PC+ Tables™
 - SPSS/PC+ Trends™
 - SPSS/PC+ Fast Start™ (a tutorial)
 - DBMS/COPY Plus™
 - SPSS Data Entry II
- SPSS/PC+ runs on IBM PC/XT, PC/AT, PS/2, and compatibles under PC-DOS and MS-DOS.

Copyright 1991 by INPUT. Reproduction Prohibited.

SPSS for OS/2, released in 1989, features the full functionality of SPSS for mainframes, minicomputers, and workstations but is tailored to the OS/2 operating environment. Multitasking capabilities are provided through the Presentation Manager interface. Add-on options are available for Advanced Statistics, Tables, and Trends.

SPSS for the Macintosh, introduced in February 1990, has the same full functionality of the SPSS mainframe product, including statistical procedures and data and file management facilities not available with SPSS/PC+.

- Add-on options include Advanced Statistics, Categories, Tables, and Trends, as well as the third-party option, CA-Cricket Graph.

- SPSS for the Macintosh runs on the Macintosh SE, SE/30, and Macintosh II with 2 MB of RAM and a 20 MB hard drive. It supports Apple Talk network and SYLK file formats.

- The product generated sales in excess of $1 million during the first six months of its release.

During 1989, SPSS also introduced a 386-based UNIX version of its statistical data analysis software.

Quality Manager™, introduced in 1990, is an integrated statistical process and quality control package available for standalone or networked personal computers.

SPSS/PC+ Studentware, introduced in 1988, is a floppy-disk-based system specifically designed as a tool for teaching statistics and data analysis across a variety of disciplines.

- In 1991, SPSS introduced SPSS/PC+ Studentware Plus™, an enhanced version of Studentware. Included with this new product are versions designed specifically for certain academic applications, including business and health care.

SPSS' microcomputer software users can subscribe to the VALUE PLUS™ plan on an annual basis. VALUE PLUS provides discounts on training, documentation, and all options. Subscribers may access a toll-free technical support hotline, free upgrades for products they own (excluding third-party products), and a quarterly newsletter.

The company's products are available through a site license, a perpetual license, or a per-user license.

Copyright 1991 by INPUT. Reproduction Prohibited.

Industry Markets

SPSS' products are cross-industry solutions. The company's revenue is divided almost equally among clients in business, government, and academia.

SPSS software supports a range of applications, including market research, survey analysis, financial planning, product testing, personnel evaluation, institutional research, decision support, health care analysis, scientific and academic research, statistical quality control, and data base marketing.

SPSS has various marketing and development agreements with Ashton-Tate, AT&T Canada, DEC, Hewlett-Packard, Integrated Technologies, IBM, Microsoft, RTI, Sequent, Sun Microsystems, Sybase, and Unisys.

Geographic Markets

Approximately 60% of SPSS' 1990 revenue was derived from the U.S. and 40% from international sales.

Prior to 1989, SPSS had always sold its products within the U.S. exclusively by telesales.

- During 1989, SPSS opened its first domestic direct sales office in Washington, D.C. as part of an aggressive new sales strategy in the U.S. This office capitalizes on one of SPSS' strengths by serving the federal government market exclusively.

Since 1984, SPSS has opened international sales offices in The Netherlands, England, Germany, Sweden, Japan, Singapore, and Australia.

Copyright 1991 by INPUT. Reproduction Prohibited.

Dropped 1/81

cc: Bill McGarry

COMPANY HIGHLIGHT

STC SYSTEMS, INC.
9 Brook Avenue
Maywood, New Jersey 07607
(201) 843-0560

Robert A. Weber, President
Wholly owned subsidiary of
Storage Technology Corporation
Public corporation
Total employees: ~~121~~ <100
Total revenues, fiscal year end
12/31/76: $4.6 million*

COMPANY BACKGROUND:

- STC Systems, Inc. (STC/S) was initially founded in Delaware in October, 1968 as Automated Information Systems, Inc. In August, 1971 the name was changed to ULTIMACC Systems, Inc. The company provided minicomputer-based turnkey small business systems, primarily to manufacturing companies in the metropolitan New York area.

- In August, 1975 ULTIMACC Systems Inc. was acquired by Storage Technology Corporation (STC), a $100,000,000 computer peripherals and maintenance company and renamed STC Systems, Inc.

OVERALL ASSESSMENT:

- Since its acquisition by STC, STC/S's management has been changing the company's orientation from $50,000 turnkey small business systems to $300,000 to $100,000,000 turnkey distributed processing systems. A projected spectacular compound annual growth rate of 61.5% from $4.6 million in 1976 to $12 million in 1978 will result from an increase in orders, installations of the higher priced distributed processing systems, and management's commitment to rapid but controlled growth.

- The STC/S management's goal is to provide quality systems and subsequent quality service at a profit. It is targeting large companies with multiple sales potential. STC/S develops and installs the initial turnkey system including operating systems and general purpose applications software. Each user then develops specialty software in-house or contracts with STC/S to develop it. Under contract, STC/S currently provides both hardware and software maintenance service on its systems. Optional software contracts providing service for user-generated programs are also available.

- The company is leveraging the expertise acquired in servicing the small business users as it expands into new markets. Management considers individual users (divisions) in a large company distributed processing environment to be similar in operational sophistication to the small

*Estimate by STC Systems, Inc. management.

parent pulling back on mktg commitment & move into distributed processing. lay-offs. EV 10/1/77

external users. In addition, STC/S will use its parent company's extensive marketing and service force of 400 field service engineers in 24 cities to supplement its own expert in-house staff and to support growth in installations and expansion of its geographic coverage. The new business is an add-on to the company's existing revenue base. STC/S is not abandoning its traditional marketplace and will increase small business systems profitability by converting from custom to packaged applications programs.

- Based on company responses to INPUT questions and STC/S company and product literature, the company appears to be an efficient, knowledgeable, well-run operation.

KEY PRODUCTS AND SERVICES:

- In 1976, small business systems generated $3 million or 70% of the total revenues, distributed processing systems $.8 million or 17%, and maintenance contracts $.6 million or 13%. The company projects that by 1978, small business systems will generate $3 million or 25% of $12 million total revenues, distributed processing systems $7.5 million or 63%, and maintenance $1.5 million or 12%. All maintenance in the U.S. is currently provided by STC/S or its parent STC. In England, third party maintenance is provided to STC/S customers. As STC/S expands its U.S. geographic penetration over the next several years, Sorbus or Entrex will probably be used to provide third party maintenance to new users in locations not planned for STC or STC/S service.

- STC/S markets the UTLIMACC® small business systems. STC/S provides all hardware and software testing and installation, on-site training, forms preparation, customer site conversion from manual system, documentation, and maintenance.

- STC/S also provides turnkey distributed processing systems for large users. The system includes a host computer and/or distributed hardware, operating systems, generalized applications software, perhipherals, installation, training, and maintenance.

APPLICATIONS: One hundred percent of STC/S applications are general business. By 1978, 20% will be data base and 80% general business.

INDUSTRY MARKETS: The majority of STC/S's 1976 revenues are derived from the manufacturing industry, as shown below:

Manufacturing	55%
Distribution	25%
Banking/finance	15%
Transportation, etc.	5%

GEOGRAPHIC MARKETS:

- Ninety-two percent of STC/S clients are located in the Northeastern States, primarily in metropolitan New York. By 1978, the company will have a stronger penetration of other regions, as shown below:

REGION OF U.S.	1976	1978
Northeast	92%	58%
North Central	3%	15%
New England	2%	5%
Pacific	2%	15%
Southeast	1%	5%
South Central	0	2%

- STC/S and STC have sales and service offices in California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Pennsylvania, Texas, Washington, and Wisconsin.

COMPUTER HARDWARE AND SOFTWARE:

- STC/S uses the following hardware to build its turnkey systems:
 - Data General NOVA 3D, 50 per year
 - Diablo and Control Data disc drives, 50 per year each vendor
 - Data General tape drives, 10 per year
 - Data Products and Centronics line printers, 50 per year
 - Hazeltine and ADDS video display terminals, 250 per year
 - Proprietary operating systems and applications software.

copy to CH

STC Unit Enter Remote Svc. Mart

PARAMUS, N.J. — STC Systems, a subsidiary of Storage Technology Corp. that markets turnkey small business systems, has entered the remote computing service market.

The firm will initially offer raw time and accounting services via remote terminal links to a pair of Digital Equipment DECsystem 1090s at parent STC headquarters in Louisville, Col.

The STC Systems offer, to be made nationwide, is designed to provide large system capability on an "as-required basis" for the small businessman in conjunction with installed small systems or as a separate service.

George Pilmanis, acting STC Systems president, said parent STC has additional capacity on the DEC machines, installed about 3 years ago for STC's own business processing. They use STC disk and tape subsystems.

He said time-sharing service has been offered for about 1 year, but it has been strictly "low key." The operation has been formalized with the nationwide approach and establishment of sales targets and systems capacity, he added.

Over the next 2 to 3 years, he said, STC Systems plans to develop software which will be compatible with that used on the firm's small business systems. The goal will be to assist users in migrating from the remote service to in-house STC Systems equipment as their data processing needs grow.

STSC, INC.
2115 East Jefferson Street
Rockville, MD 20852
(301) 984-5000

William M. Gibson, President
Private Corporation
Total Employees: 210
Total Revenue, Fiscal Year End
2/28/90: $19,000,000

The Company

STSC, Inc. develops, markets, and supports application and systems software products through the following divisions:

- The ManuGistics Division provides planning and control software and professional services for the management of manufacturing, distribution, and transportation operations. This division contributed about 55% to fiscal 1990 revenue.

- The Analytic Software Division develops and markets APL application development tools and statistical software products that enable business professionals to perform complex quantitative analysis of numeric data. This division contributed approximately 45% to fiscal 1990 revenue.

STSC was formed in 1969 as Scientific Time Sharing Corporation to offer remote computer timesharing services. The company changed its name to STSC in 1979 to reflect the focus on its software product business.

- In 1982, STSC was acquired by Continental Telecom, Inc. (Contel) and became a wholly owned subsidiary of Contel.

- In 1984, STSC was organized into two business units focusing on (1) logistics and manufacturing and (2) APL and statistical software.

- In March 1986, STSC management purchased the company from Contel and STSC became a private corporation.

- In March 1990, STSC acquired Rover Technology Company (Bala Cynwyd, PA) for cash and stock, expanding STSC's packaged and customized transportation planning software offerings.

STSC's fiscal 1990 revenue reached approximately $19 million, a 10% increase over fiscal 1989 revenue of $17 million.

Copyright 1990 by INPUT. Reproduction Prohibited.

- STSC's management anticipates growth of 20% to 30% annually over the next three years.

- Revenue increases will be attributed to continued growth of current software products which have averaged a compound annual growth rate of 25% over the past three years.

As of October 1990, STSC employed 210 persons. Approximately 170 are located at the headquarters building in Rockville, with the balance of the employees located in offices across the U.S. and the U.K.

STSC competitors include American Software, Dun & Bradstreet Software, Andersen Consulting, SPSS, and SAS Institute.

Key Products and Services

STSC derived approximately 70% of its fiscal 1990 revenue from its various application and systems software products, 20% from professional services, and 10% from systems operations (facilities management) services.

STSC's current software products are summarized in Exhibits A and B. STSC currently has more than 135,300 software product installations worldwide.

STSC provides education and training, consulting, and customization professional services for all of its software products.

STSC also offers systems operations (facilities management), disaster recovery, and remote computing services with local dial-up access in over 500 cities worldwide.

Copyright 1990 by INPUT. Reproduction Prohibited.

EXHIBIT A

STSC SOFTWARE PRODUCTS - MANUGISTICS DIVISION

PRODUCT	DESCRIPTION	OPERATING ENVIRONMENT
LOGISTICS*PLUS	Integrated enterprise-level logistics system	IBM mainframe, midrange, PC, and compatibles; DEC VAX
- FORECAST*PLUS - DRPII*PLUS - MRPII*PLUS	Demand forecasting module Distribution resource planning module Manufacturing and materials planning module	
FINITE CAPACITY SCHEDULING SYSTEM	Production scheduling system for process/ repetitive manufacturers	IBM PS/2
TRUCKS	Automated routing and scheduling system for transportation management	IBM mainframe, PC, and compatibles
ROUTE SALES PLANNER	Automated system to develop territories for conventional route sales operations	IBM mainframe, PC, and compatibles; HP; DEC; Unisys
GEOCODING SYSTEM	Automated tool for geographically mapping a territory for transportation management	IBM PCs and compatibles; HP; DEC; Unisys
VEHICLE ROUTING & SCHEDULING - COORDINATE BASED	System for dynamic routing and scheduling of vehicles in multi-stop operations for transportation management	IBM mainframe, PC, and compatibles; HP; DEC; Unisys
BULK COMMODITY DISTRIBUTION	System to develop route schedules for multiple pick and drop operations in bulk commodity distribution operations	IBM mainframe, PC, and compatibles; DEC VAX
ROUTE DESIGN SYSTEM*	Develops a master set of routes for pick-up and deliveries	IBM PS/2 and compatibles
CARRIER INBOUND SYSTEM	System to match freight bills against the Route Design System	IBM PS/2 and compatibles

* *Designed for "For-Hire Carriers"*

Copyright 1990 by INPUT. Reproduction Prohibited.

EXHIBIT B

STSC SOFTWARE PRODUCTS - ANALYTICAL SOFTWARE DIVISION

PRODUCT	DESCRIPTION	OPERATING ENVIRONMENT
APL*PLUS	Application development system featuring APL interpreter and enhancements	IBM mainframes, PC, and compatibles; Sun; DEC; UNIX systems
APL*PLUS TOOLS	Screen management, APL programming, and software maintenance utilities	IBM PC, XT, AT, and compatibles
APL*PLUS RUN-TIME	A partial APL*PLUS system used to run applications written in APL	IBM PCs and compatibles
STATGRAPHICS	PC statistical graphic analysis system	IBM PC, XT, AT, and compatibles

Industry Markets

STSC derives the majority of its revenue from clients in the manufacturing, distribution, banking, finance, insurance, transportation, and services industries.

Markets served by STSC's products are as follows:

- FORECAST*PLUS is designed for production, distribution, and inventory planners in the make-to-stock industries and primarily for heavily promoted products to forecast product demand.
- DRPII*PLUS is designed for planners who manage finished goods inventory, primarily make-to-stock, in the manufacturing and distribution industries.
- MRPII*PLUS is intended to assist planners in achieving just-in-time delivery of raw materials, primarily in the make-to-stock environments of manufacturing and distribution businesses.
- The Finite Capacity Scheduling System is developed for process manufacturers to produce feasible production schedules by analyzing realistic capacities and constraints.
- The transportation products are used for transportation management in a number of industries, including the food,

Copyright 1990 by INPUT. Reproduction Prohibited.

beverage, drug, chemical, and furniture industries, as well as in private fleet market and common carrier companies.

- APL*PLUS products are designed for financial analysts, actuaries, mathematicians, and others who analyze complex quantitative data.
- STATGRAPHICS is used by statisticians, quality control engineers, market researchers, business analysts, mathematicians, medical and health professionals, and other professionals with a need for comprehensive data analysis.
- Systems operations services are directed primarily to licensees of STSC's products and other corporations on the East Coast who require computer outsourcing, disaster recovery, or remote computing services.

Geographic Markets

Approximately 65% of STSC's fiscal 1990 revenue was derived from the U.S. The remaining 35% was from foreign markets.

STSC markets its software products through an international sales force and markets certain of its products (TRUCKS, APL products, and STATGRAPHICS) through a worldwide network of distributors.

In addition to its headquarters in Rockville, STSC has offices in Atlanta, Boston, Chicago, Philadelphia, Los Angeles, and the U.K.

Computer Hardware and Software

STSC has several mainframe, midrange, minicomputer, and workstation systems from IBM, Amdahl, and DEC installed at its headquarters in Rockville.

Copyright 1990 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

STSC, INC.
2115 East Jefferson Street
Rockville, MD 20852
(301) 984-5000

William M. Gibson, President
Private Corporation
Total Employees: 160
Total Revenue, Fiscal Year End
12/31/86: $13,000,000

THE COMPANY

- STSC, Inc. develops and markets business analysis software products for the management of various industries. The company also markets software developed by third parties and provides remote computing and professional consulting services.
 - STSC was formed in 1969 as Scientific Time Sharing Corporation to offer remote computer timesharing services.
 - STSC became a publicly held company in 1978 and in 1979 changed its name to STSC, Inc. to reflect the expansion of its business into packaged software.
 - In 1982 the company was acquired by Continental Telecom, Inc. (Contel) and STSC became a wholly owned subsidiary of Contel.
 - In March 1986 STSC management bought the company from Contel and STSC became a private corporation.
 - The purchase included cash, debt, and assumption of certain liabilities.
 - Under terms of the agreement, certain of STSC's then current executives became majority owners of the company.
 - Employee and management participation in ownership of the company is also available through an Incentive Stock Option Plan and an Employee Stock Ownership Plan.
- STSC's 1986 revenue was approximately $13 million.
 - STSC's management anticipates growth of 20-30% annually over the next three years.
 - Revenue increases will be attributed to continued growth of current software products which have averaged a compound growth rate of 50% over the past three years.

©1987 by INPUT. Reproduction Prohibited.

- STSC has three operating divisions as follows:
 - The Logistics Software Division provides planning and operational software products for decision-making within the distribution and transportation functions in corporations.
 - APL Products and Services Division develops and markets a set of software tools that enable business professionals to perform complex quantitative analysis of numeric data.
 - Software Publishing Division specializes in publishing microcomputer software for data analysis.
- As of December 1986, STSC employed 160 persons. Currently, there are 160 employees, segmented as follows:

Marketing/sales	50
Software services/customer support	85
General and administrative	25
	160

- STSC's competitors include American Software, Management Science America, SPSS, Ashton-Tate, and SAS.

KEY PRODUCTS AND SERVICES

- STSC derived approximately 75% of its 1986 revenue from systems and application software products. Of the remaining 25% of revenue, 20% was from remote computing processing services and 5% was from consulting professional services.
- Available software products are shown in the exhibit.
 - The company's application development system software focuses on the APL programming language. The products include APL*PLUS, APL*PLUS Tools, the APL*PLUS Compiler, and Pocket APL.
 - STSC's application software consists of four packages--ATLAS*GRAPHICS, STATGRAPHICS, LOGISTICS*PLUS, and TRUCKS.
 - STATGRAPHICS is a statistical graphics system developed by Statistical Graphics Corporation.
 - The company's products are available in the mainframe, minicomputer, and microcomputer environments.

©1987 by INPUT. Reproduction Prohibited.

EXHIBIT

STSC SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	CPU REQUIREMENTS
SYSTEMS SOFTWARE		
APL * PLUS	An application development system, featured APL interpreter and enhancements.	IBM PCs, mainframes, and compatibles; Macintosh; UNIX
APL * PLUS Tools	Screen management, APL programming, and software maintenance utilities.	IBM PC, XT, AT and compatibles.
APL * PLUS Compiler	An APL program speeding tool.	VM/SP compatibles.
Pocket APL	An on-line facilities support tool.	IBM PC, PC jr compatibles.
APPLICATION SOFTWARE		
ATLAS * GRAPHICS	A PC mapping system.	IBM PC, XT, AT, and compatibles.
STATGRAPHICS	A PC statistical graphic analysis system.	
LOGISTICS * PLUS	An integrated logistics planning system.	IBM mainframes, PCs, and compatibles.
- FORECAST * PLUS	A forecasting product demand system.	
- DRP II * PLUS	A distribution resource planning and control system.	
- MRP II * PLUS	A material resource planning system.	
TRUCKS	An automated routing and scheduling system.	IBM mainframes, PCs, and compatibles.

©1987 by INPUT. Reproduction Prohibited.

- The software products are sold through a combination of direct sales and distributors.

- STSC offers clients the option to use its APL*PLUS system products on its timesharing network service.
 - The service is offered via local dial access in approximately 500 cities worldwide.

- STSC provides professional consulting services involving APL*PLUS system products.
 - Consulting services include education and training and the development of customized APL applications.

- In July 1986 STSC and I.P. Sharp Associates (IPSA) of Toronto, Canada signed an agreement for a long-term marketing and development association.
 - Under terms of the agreement, STSC and IPSA will jointly convert STSC's C language-based APL*PLUS system for mid-sized computers to a Sharp APL system, also for mid-sized computers.
 - The agreement also stipulates that IPSA will market and resell STSC's APL*PLUS system for the PC environment.

INDUSTRY MARKETS

- STSC derives the majority of its revenue from clients in manufacturing, distribution, banking and finance, insurance, transportation, and services.

- Markets served by STSC's products are as follows:
 - ATLAS*GRAPHICS is designed for sales and marketing managers, financial analysts, market researchers, actuaries, demographics, and other professionals who analyze geographically-based data.
 - STATGRAPHICS is used by statisticians, quality control engineers, market rersearchers, business analysts, mathematicians, medical and health professionals, and other professionals with a need for comprehensive data analysis.
 - APL*PLUS system products are designed for financial analysts, actuaries, mathematicians, and others who need to analyze complex quantitative data.
 - FORECAST*PLUS is developed for production, distribution, and inventory planners.
 - DRPII*PLUS is designed for planners who need to manage finished goods inventory in the distribution industry.

©1987 by INPUT. Reproduction Prohibited.

- MRPII*PLUS is for the management of the manufacturing industry.
- TRUCKS is designed for transportation management.

GEOGRAPHIC MARKETS

- Approximately 80% of STSC's 1986 revenue was derived from the U.S. The remaining 20% was from foreign markets.
- Since STSC became a private company it has divested all of its subsidiaries and branch offices. The company operates strictly from its headquarters in Rockville.

COMPUTER HARDWARE AND SOFTWARE

- STSC has the following computers installed at its headquarters in Rockville:
 - 2 IBM 3033, Model U.
 - 1 IBM 4341, Model 2.

©1987 by INPUT. Reproduction Prohibited.

STSC, INC.
2115 East Jefferson Street
Rockville, MD 20852
(301) 984-5000

William M. Gibson, President
Subsidiary of Continental Telecom, Inc.
Total Employees: 260
Total Revenue, Fiscal Year End
12/31/82: $25,496,000

THE COMPANY

- STSC, formed in 1969 as Scientific Time Sharing Corporation, offers APL-based remote computing services, distributed processing using microcomputers, and professional services, and markets a variety of financial and systems software products.

- STSC operated as a public company from October 1978 until its acquisition by Continental Telecom (Contel) in September 1982. Contel, the third largest non-Bell telephone holding company, purchased STSC for $11 per share, or $24.3 million.

 - In a major diversification program started in 1979, Contel acquired several companies to build a business base in nonregulated industries. Other computer services acquisitions include:

 . Network Analysis Corporation, 1980.
 . International Computing Company, 1981.
 . National Bancard Corporation, 1981.
 . Chase Manhattan's Merchant Services Business, 1983.

- STSC's 1982 revenue was $25.5 million, down 11% from 1981 revenue of $28.7 million. Revenue declines were attributed to:

 - The depressed remote computing services market.
 - Movement of several large customers to in-house systems.
 - Competition from financial applications on personal computers.

- Plans to increase revenue and improve profit margins are centered on further development and marketing of STSC's products through various delivery modes. STSC is offering clients the option to use its products on its timesharing network, to license proprietary products for in-house use, to use its internally-developed software to establish a distributed processing network of microcomputers, or to have a phased combination of the above. Additionally, STSC has developed and is marketing a number of software products for microcomputers and mainframes.

©1983 by INPUT. Reproduction Prohibited.

- STSC has four operating groups and one subsidiary, APL*PLUS Ltd. in England. Three former subsidiaries, MTSC, Resource Systems, and Management Methods, have been consolidated into STSC. Operating units, centered around major product lines, are:

 - Information Center Group.
 - Finance Group.
 - Manufacturing and Distribution Group.
 - APL Division.

- At the end of 1982 STSC had 260 employees. Current employees number 316 and are segmented as follows:

Professionals	134
Managers	71
Sales	31
Technical	18
Clerical	62
	316

- Competitors of STSC's remote computing services are ADP Network Services, Boeing Computer Services, CISInetwork, CDC's Business Information Services, GEISCO, IBM, I.P. Sharp, D & B Computing Services (NCSS), and Tymshare. Competition for STSC's software products comes from I.P. Sharp, IBM, Comserv, and American Software.

KEY PRODUCTS AND SERVICES

- INPUT estimates STSC derived about 70% of its 1982 revenue from processing services, 15% from professional services, and 15% from software product sales. Fifty percent of all STSC revenue comes from its financial products and associated services.

- STSC provides remote computing services based on the APL programming language through its proprietary APL*PLUS network service. Areas of specialization include decision support management, information center management, materials and manufacturing applications, and funds management.

 - A profile of the key applications available on STSC's network is presented in Exhibit A.

 - New products added to STSC's network service follow:

 . FUND*STAR™ Information Systems provides banking and investment institutions with security processing, accounting routines, system administration facilities, general ledger, audit trail, and report generation.

©1983 by INPUT. Reproduction Prohibited.

EXHIBIT A

STSC APL*PLUS NETWORK PROFILE

APPLICATION AREA/PRODUCT NAME	APPLICATION AREA/PRODUCT NAME
• Operating Environment – 1 IBM 3033, VM • Programming Languages – APL – ASSEMBLER – BASIC – COBOL – FORTRAN – PASCAL – PL/1 • Data Management – EMMA – ORACLE – SHAREFILE • Data Bases – A.M. Best Insurance Database – CAB ER-586 (Airlines). – CAB Form 41 (Airlines) – CAB Ten Percent Origin–Destination (Airlines) – CITIBASE (Economic Data) – FASB Inflation Databank (Financial) – IFS (Economic) – Offshore Data Information Network (Energy) – ONSITE (Demographic)	• Manufacturing (CMCS) – Forecasting – Inventory Management – Production Scheduling – Material Requirements Planning – Shop Floor Control – Warehousing and Distribution • Financial – FPS (Financial Planning) – FUND*STAR (Investment Analysis) • Insurance – POLICY*PLUS – ACT*PLUS • INFORMATION CENTER*PLUS – Billing and Chargeback – Capacity Planning and Performance Evaluation – FASTBACK • Transportation – TRUCKS • Other – APL*PLUS/1140 – APL*PLUS/1280 – ADRS*PLUS

©1983 by INPUT. Reproduction Prohibited.

- INFORMATION CENTER*PLUS™ includes tools to help end users and EDP managers allocate, evaluate, and optimize computer resources. Available are the Billing and Chargeback System, Capacity Planning and Performance Evaluation System, and the FASTBACK™ System for performing dumps and restores.

- POLICY*PLUS™ is an interactive decision support tool for analysis of large insurance policy data bases.

- Comprehensive Manufacturing Control System (CMCS®) is a decision support tool for manufacturing and distribution.

- Transportation Routing Using Computer-Keyed Scheduling (TRUCKS) is a vehicle scheduling and optimizing application.

- STSC's software revenue, estimated at 15% of 1982 sales, consists of mainframe and microcomputer application development tools, financial products, and a few industry-specific applications. Since 1979 a number of STSC's proprietary software products, previously only available on the network, have been repackaged for in-house use. STSC expects its remote computing revenue to decline in favor of in-house software product sales.

 - A current list of STSC software products is presented in Exhibit B.

 - CMCS (manufacturing control) and DATAPORT™ (spreadsheet) are expected to be the sales leaders of STSC's software products.

 - Recent software product announcements have been:

 - INFORMATION CENTER*PLUS, which includes the previously mentioned modules for billing, capacity planning and performance evaluation, and dumps and restores. In addition, the following optional products and services are available.

 - A library of end-user software for microcomputers and mainframes including report generators, data managers, and electronic mail systems.

 - Packages for document storage and retrieval and statistical analysis.

 - APL education, training, and consulting.

 - ADRS*PLUS™ for improved computer resource performance and speedups to IBM's ADRS-II (a Departmental Reporting System).

 - APL*PLUS® Application Development System, STSC's enhanced version of APL.

©1983 by INPUT. Reproduction Prohibited.

EXHIBIT B

STSC SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	ONE-TIME LICENSE FEE	NUMBER INSTALLED	CPU REQUIREMENTS (OPERATING SYSTEM)
MAINFRAME				
APL*PLUS®/1140	Enhanced Version of APL	$25,000	40+	IBM 370, 4300, and compatible (VM/SP, CMS/SP)
APL*PLUS®/1280	Enhanced Version of APL	$25,000	40+	IBM 370/145, 4341, 303X, 308X, and compatible (MVS/TSO)
ACT*PLUS™	Actuarial Sciences	$15,000	50+	IBM 370, 433X, and compatible (VM/CMS, MVS/TSO)
ADRS*PLUS™	Report Generator	$10,000	5	IBM 370, 433X, and compatible (VM/CMS)
CMCS® Comprehensive Manufacturing Control System	Materials Management	$40,000 - $275,000	28	IBM 370, 433X, 303X, 308X, and compatible (VM/CMS, MVS/TSO)
DATAPORT™	Spreadsheet	$15,000	New	IBM 370, 30XX, 43XX, and compatible (VM/CMS, VM/SP)
EMMA®	Data Management	$20,000	25	IBM 370, 433X, and compatible (VM/CMS, MVS/TSO)
FPS	Financial Planning	$45,000	20	IBM 370, 433X, and compatible (VM/CMS)
FUND*STAR™	Investment Analysis	On Request	2	IBM 370, 433X, and compatible (VM/CMS, MVS)
INFORMATION CENTER* PLUS™	EDP Management Tools	$17,500	New	IBM 370, 433X, and compatible (VM/CMS)
ORACLE®	Relational Data Base Management System	On Request	New	IBM 370, 433X, and compatible (MVS/TSO)
APL*PLUS SQL/R™	APL Interface to ORACLE	Sold with ORACLE	New	IBM 370, 433X, and compatible (MVS/TSO)
POLICY*PLUS™	Insurance	$50,000	20	IBM 370, 433X, and compatible (VM/CMS, MVS/TSO)
TRUCKS	Truck Routing	$150,000 VM $180,000 MVS	5	IBM 370, 433X, and compatible (VM/CMS, MVS/TSO)
MICROCOMPUTER				
APL*PLUS®/PC	APL Compiler	$595	1,500	IBM PC/XT, COMPAQ, Columbia Data MPC (PC DOS 1.1, 2.2)
APL*PLUS®/80	APL Compiler	$295	300	TRS-80 Model III (TRS-DOS, LDOS)
APL*PLUS®/PC Financial and Statistical Library	Financial Analysis	$275	25	IBM PC (PC DOS)

©1983 by INPUT. Reproduction Prohibited.

- APL*PLUS SQL/R™, the interface required between APL analysis capabilities and ORACLE® query facilities.

. DATAPORT, a trademark of XNUM Corporation, is a spreadsheet application for larger mainframes. It uses larger virtual storage files and extends the spreadsheet concept to three and four dimensions of rows, columns, and sets. DATAPORT can interface with any product that will produce a flat CMS file as output or take a CMS file as input. DATAPORT will also generate interface files that can be downloaded to microcomputer products like VisiCalc, Lotus' 1-2-3, or Multiplan. Interfaces are also available to other products, such as:

 - FOCUS, APL/DI, and QBE - data base and query products.

 - TELL-A-GRAF and SAS/GRAPH - graphics systems.

 - SAS, FPS, IFPS, and ADRS-II - reporting and analysis systems.

- STSC's microcomputer-based software products, sold through a combination of direct sales and distributors, have been offered since 1982. Products marketed are:

 . The APL*PLUS® /PC System is an extended APL language for the IBM PC/XT, COMPAQ, or Colombia Data Products MPC. The system offers all APL language primitive functions and operators, and includes graphics primitives for the development of business and free-form graphics displays, a full-screen editor, page scrolling, an English-like keyword version for users of APL, an on-line HELP facility, and the ability to call DOS commands from APL in order to integrate non-APL programs and packages. It has a "simple" terminal mode using either the APL or the ASCII character set, and a "smart" terminal mode for customized intelligent machine interaction.

 . APL*PLUS® /80 is the application development system for the Radio Shack TRS-80 Model III. It includes complete APL; upwards compatibility to STSC's mainframe APL systems; features for files, formatting, and error trapping; and system functions for space management in the workspace and for interface with non-APL programs. It functions as a standalone processor or as a communications terminal to a remote processor using either the APL or the regular ASCII character set.

 . APL*PLUS® /PC Financial and Statistical Library contains more than 200 routines to perform financial calculations, forecast time series, compute statistical measures, and generate proba-

©1983 by INPUT. Reproduction Prohibited.

bility distribution data. Routines may be used on a standalone basis or may be integrated with other APL*PLUS applications on the IBM PC.

- Professional services provided by STSC include consulting, custom design and programming, technical support, training, and documentation. STSC's Optimation Division consists of highly experienced specialists in APL programming and optimization techniques and provides senior-level consulting services in all facets of the APL language.

INDUSTRY MARKETS

- STSC derives the majority of its revenue from clients in manufacturing, banking and finance, insurance, transportation, and services.

GEOGRAPHIC MARKETS

- Approximately 95% of STSC's 1982 revenue was derived from the U.S. Less than 5% of sales were foreign. Most of the foreign revenue comes from software products.

- U.S. sales offices are located in Atlanta, Boston, Chicago, Dallas/Ft. Worth, Denver, Detroit, Hartford, Houston, Los Angeles, New York, Philadelphia, Raleigh/Durham, San Francisco, Seattle, Washington, D.C., and White Plains.

- APL*PLUS Ltd. is STSC's subsidiary in England. Thirteen distributors are under contract to sell STSC products in 12 foreign countries. International distributors are in France, West Germany, Spain, Japan, South Africa, Denmark, Italy, Finland, Hong Kong, Canada, Australia (2), and Austria.

COMPUTER HARDWARE AND SOFTWARE

- STSC's computing center is located at its headquarters in Rockville. Equipment consists of one IBM 3033 operating under VM.

- Network services are available to more than 500 cities worldwide. STSC uses a combination of leased lines and communications services purchased from Tymnet in the U.S., and from Datex (West Germany), Transpac (France), and Datapac (Canada).

©1983 by INPUT. Reproduction Prohibited.

'80 21,101,000
IOT 3,231
Net 1,482
Per Share .86

COMPANY HIGHLIGHT

STSC, INC.
7316 Wisconsin Avenue
Bethesda, Maryland 20014
(301) 657-8220

Daniel Dyer, Chairman of the Board and President
Public Corporation, OTC
Total Employees: 243
Total Revenues, Fiscal Year End 5/31/79: $16,627,766

THE COMPANY

- STSC, Inc. was formally Scientific Time Sharing Corporation until October 1979 when it changed its name to STSC, Inc. It was incorporated in Delaware in May 1969 and began to offer a commercial timesharing service based on the APL language in the United States and Canada in August 1969. STSC continues to provide remote access computing services and offers proprietary systems and application software as well. STSC became a publicly held company in October 1978.

- Revenues in fiscal 1979 increased 23% over revenues in fiscal 1978. Net income decreased, however, by $200,000 or 17% over the same period. A five year financial summary follows:

STSC
FIVE YEAR FINANCIAL SUMMARY
($ Thousands, Except Per Share Data)
(FYE 5/31)

ITEM \ FISCAL YEAR	1979	1978	1977	1976	1975
Revenues	$16,628	$13,567	$10,212	$ 7,427	$ 5,579
. Percent increase from previous year	23%	33%	37%	33%	38%
Income (loss) before income taxes and extraordinary item	$ 2,261	$ 1,870	$ 1,387	$ 1,166	$ (269)
. Percent increase from previous year	21%	35%	19%	533%	(176%)
Net income (loss)	$ 980	$ 1,180	$ 1,001	$ 855(A)	$ (204)
. Percent increase previous year	17%	18%	17%	519%	(171%)
Net earnings (loss) per share	$.61	$.81	$.72	$.65	$ (.16)
. Percent increase from previous year	(25%)	13%	11%	506%	(173%)

(A) Includes $35,000 tax benefit of net operating loss carryforward.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Revenues for fiscal 1979 increased by $3,061,000. Of this increase, STSC management attributes $1,704,000 or 55.7% to increased use of STSC's services by existing customers, $1,032,000 or 33.7% to new customers added during 1979, and $325,000 or 10.6% to a price increase.

 - STSC management attributes the decline in net income to a higher effective tax rate in 1979 and to the fact that approximately 40% of the losses incurred in its European operation were not deductible in determining taxable income.
 - Revenues from European operations for fiscal year 1979 were $321,000 and $128,000 for fiscal year 1978. Expenses, including domestic costs related to European operations, were $1,249,000 for 1979 and $281,000 in 1978. STSC expects to operate at a loss in Europe at least through the fourth quarter of fiscal 1980. Financial results in Europe through fiscal year 1979 were not consistent with STSC's plans.

- STSC had approximately 500 customers in 1979, the largest of whom was Citicorp. Citicorp substantially reduced its usage of STSC's services from 24% of total STSC revenues in 1978 to 15% in 1979. The reduction of Citicorp's usage of STSC's services is due to the conversion to in-house computer facilities.

 - Eight other major customers accounted for 24% of revenues in fiscal 1978 and 27% in fiscal 1979.

- A new division was created in 1979, the Management Technology Division. It was organized to provide advanced technical consulting to government and private industry. Management Technology has eight staff members who specialize in energy-related economic analysis, statistical forecasting and analysis, management science techniques, and optimization systems.

- Also in 1979, STSC signed a five year contract to develop and market software products for voice and data communications networks in conjunction with Telco Research Corporation of Nashville.

 - The companies plan to develop a voice network design system called Optymus which will enable telecommunications managers to design their voice networks to take advantage of call queuing and route advancement technology.
 - Optymus will combine STSC's Juno WATS analysis system and Telco's Network Optymizer/2 to determine optimal allocation of lines within the network. The system will be offered through STSC's APL* PLUS Timesharing Service.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- On December 12, 1979, STSC announced the acquisition of California based Applied Computer Science Research Corporation (ACSRC) for $650,000 in cash. ACSRC develops software systems for processing the APL language. STSC management expects the acquisition will enable it to combine its experience in developing APL systems for large-scale computers with ACSRC's experience in developing APL language processors that make efficient use of computer memory.

- STSC employed 243 people during fiscal 1979, segmented as follows:

-	Marketing/sales	132
-	Software services	31
-	Computer operations	43
-	General and administrative	37
	Total	243

- STSC management claims its APL service revenues are larger than those of any other APL service company in the United States. Management considers its remote computing service competitors to be: ADP Network Services, Inc.; Boeing Computer Services, Inc.; Computer Sciences Corporation; Control Data Corporation; General Electric Company; IBM; I.P. Sharp Associates, Ltd.; McDonnell Douglas Automation Company; National CSS, Inc.; and Tymshare, Inc.

KEY PRODUCTS AND SERVICES

- Approximately 93% of STSC's revenues stem from data processing services. Of that, 75% is interactive remote computing and 25% is remote batch. The remaining 7% of revenues stem from consulting and programming services. STSC is in the process of developing systems and applications software and has begun licensing its own software on a customer's computer. Revenues from these products were insignificant in FY 1979.

- STSC primarily provides remote access computing services based on the APL programming language and STSC's proprietary APL* PLUS System. STSC has developed proprietary application systems for financial planning and reporting, manufacturing materials management, banking management information systems, insurance actuarial analysis, communicatons network design, and electronic message services. A listing of the applications available on the APL* PLUS Services is found in Exhibit A.

- Two enhancements to the APL* PLUS Service were added in 1979, Automatic Control of Execution (ACE) and the APL* PLUS VM Service.

 - ACE is a software feature which allows customers to process lengthy or repetitious applications which previously may not have been economical to run on an APL time sharing system. This is accomplished through the automatic scheduling and processing of jobs and the automatic handling of exceptions that would otherwise require manual user

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

EXHIBIT A

STSC, INC.

APPLICATIONS AVAILABLE ON APL* PLUS SERVICE*

APPLICATION AREA/PRODUCT NAME	APPLICATION AREA/PRODUCT NAME
• OPERATING ENVIRONMENT – AMDAHL 470 V/6 II – IBM 370/148	• COMMUNICATIONS •– MESSAGE PROCESSING SYSTEM – ARIES SYSTEM FOR NETWORK DESIGN AND ANALYSIS
• PROGRAMMING LANGUAGES SUPPORTED – VSAPL – FORTRAN – COBOL – PL/1 – BASIC – ASSEMBLER – MPSX – SCSS	• GRAPHCIS – PLOT 10 •– CONTOUR PACKAGE •– PLOT PACKAGE
• DATA MANAGEMENT SOFTWARE •– SHARED INFORMATION MANAGEMENT SYSTEM – EMMA	• MANUFACTURING – MATERIALS MANAGEMENT – MANUFACTURING CONTROL SYSTEM
• DATA BASES AVAILABLE – NATIONAL BUREAU OF ECONOMIC RESEARCH – STANDARD INDUSTRIAL CLASSIFICATION – PRIMES	• SECURITIES DATABASE •– QUOTE·PLUS (GTE-IS QUOTATION DATA·BASE) •– MEDIA GENERAL ACCESS (MEGAS)
• FINANCIAL PLANNING AND ANALYSIS •– FINANCE PAK III •– PORT MANAGE (PORT FOLIO MANAGEMENT) •– FPS (FINANCIAL PLANNING)	• MISCELLANEOUS •– ACT·PLUS (ACTUARIAL MATH.) •– ADDRESS MANAGEMENT PACKAGE •– APL INSTRUCTION •– FILESORT FACILITY (BATCH) •– COMPUTER USAGE DATA •– PERT·PLUS (PROJECT MANAGEMENT) – MINIPERT (PROJECT MANAGEMENT) •– FULL TEXT DOCUMENT RETRIEVAL – EPLAN (ECONOMETRIC PLANNING) •– FILE SUBSYSTEM – X-11 (FORECASTING) – MATHPAK •– PROJECT ACCOUNTING •– QUICKPLAN (REPORT PREPARATION) •– PERSONNEL ASSIGNMENT AND SCHEDULING •– WORKSPACE DOCUMENTATION PACKAGE – STATPAK (STATISTICS)
• FINANCIAL APPLICATIONS/TOOLS •– ACCOUNTING SYSTEM •– GENERAL LEDGER FOR CREDIT UNIONS •– JOB COST ACCOUNTING	
• CIRCUIT ANALYSIS •– ELECTRONIC CIRCUIT DESIGN AND ANALYSIS PROGRAM – MARTHA CIRCUIT ANALYSIS SYSTEM	

* PROPRIETARY

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

intervention to avoid termination. Jobs can be scheduled, therefore, when the computer workload is light and processing costs are lower.

- To supplement its APL* PLUS Service, STSC initiated a new remote computing service, the APL* PLUS VM Service, using an IBM 370/148. This service is based on IBM's Virtual Machine/370 (VM) systems software and in addition to APL, offers COBOL, FORTRAN, and PL/I programming languages which were not previously offered by STSC.

- In order to participate in the market for in-house computer facilities precipitated by declining hardware costs, STSC is adapting its proprietary software to support in-house computers. STSC is developing enhancements to IBM's VM and VS APL systems. These enhancements include a file system for managing large data bases which can be accessed simultaneously from remote locations, formatting facilities for producing reports, and features for protecting the security of customer data.

 - STSC has started to market its proprietary software and plans to begin installation of an enhanced version of IBM's VS APL system on customers' in-house computer facilities in early 1980. At that time, STSC will also offer the enhanced version of VS APL as part of its APL* PLUS VM Service and expects to begin realizing revenues from licensing its proprietary software, as well.

- STSC determined through testing that its APL* PLUS System will operate successfully on IBM System/370 compatible hardware. In 1978, STSC had intended to enter the business of supplying systems comprised of OEM computer hardware in combination with STSC's proprietary software. However, announcement of the IBM 4300 series computers altered that intention and STSC currently has no plans to offer 370 compatible computers. It will continue to market its software for operation on IBM and IBM compatible computers.

 - STSC has an agreement with Magnuson Systems Corporation, a manufacturer of IBM compatible computers, under which the two companies are jointly marketing their products and services. There were no revenues from this agreement in FY 1979.

- Approximately 7% of STSC revenues were derived from professional services: consulting and programming.

 - STSC's Management Technology Division (MTD) functions as a consulting group and has concentrated on building expertise in the analysis of energy issues. Examples of contracts include:
 . Provision of quick-response macroeconomic analysis in support of President Carter's April 1979 energy message on crude oil pricing, contracted by the Brookhaven National Laboratory.
 . Analysis for the Department of Energy of the economic impact of crude oil decontrol.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Development of econometric modeling systems to forecast and evaluate the impact of various energy-related decisions on the domestic economy.
- A recent contract from the Brookhaven National Laboratory to analyze the formation of capital stock in the U.S. economy and investigate whether barriers exist which inhibit investment and energy capital growth.

INDUSTRY MARKETS

- STSC's 1979 revenues were derived from approximately 500 customers, approximately 70 of which were Fortune 500 industrial companies. A breakdown by industry sector follows:

-	Manufacturing	30%
-	Banking and finance	18
-	Services	13
-	Insurance	12
-	Mining	10
-	Others (each less than 10%)	17
	Total	100%

GEOGRAPHIC MARKETS

- Approximately two percent of STSC's revenues are derived from European operations, the remaining 98% from domestic operations. Revenues are derived from the entire United States, with some concentration in the Eastern half.

- STSC has marketing offices in Boston, Chicago, Dallas/Ft. Worth, Denver, Detroit, Hartford, Honolulu, Houston, Los Angeles, New York, Philadelphia, Raleigh/Durham, San Francisco, Washington, DC, and White Plains.

- Its international offices are located in England, Spain, and West Germany. Société de Traitements et de Services Conversationnels is an independent French corporation marketing STSC's services in Belgium, France, Italy, Luxembourg, and The Netherlands.

COMPUTER HARDWARE AND SOFTWARE

- STSC operates its computing center from its headquarters in Bethesda, MD. Equipment consists of:

 - One Amdahl 470/V6-II operating under OS/MVT.
 - One IBM System 370 Model 148 operating under VM.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- All equipment is accessed via STSC's network serving 165 cities in the U.S. and Puerto Rico, 54 cities in Canada and its other international locations.
- STSC uses a combination of leased lines and communications services purchased from Tymnet.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

name changed to AGENA corporation

COMPANY HIGHLIGHT

SAFECOM, INC.
Safeco Plaza
Seattle, WA 98185
(206) 545-5000

L.L. Mangis, President
Subsidiary of Safeco Corporation
Total Employees: 300
Total Revenue, Fiscal Year
End 12/31/80: $13,926,000

PRINCIPAL BUSINESS

- Safecom, founded in 1970, provides processing services and turnkey systems to independent insurance agents.

FINANCIALS ($ thousands, except per share data)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Total Revenue	$13,926	$11,481	$ 9,464	$ 7,754	$ 6,158
. Percent increase from previous year	21%	21%	22%	26%	-
Income Before Taxes	$ 2,734	$ 2,319	$ 1,815	$ 1,529	$ 1,188
. Percent increase (decrease) from previous year	18%	28%	19%	29%	-
Net Income	$ 1,671	$ 1,292	$ 933	$ 810	$ 618
. Percent increase (decrease) from previous year	29%	38%	15%	31%	-
Earnings Per Common Share	$ 1.67	$ 1.29	$.93	$.81	$.62
. Percent increase (decrease) from previous year	29%	38%	15%	31%	-

SOURCES OF REVENUE

Processing Services	82%
Turnkey Systems	18%

©1981 by INPUT. Reproduction Prohibited.

EMPLOYEES

Marketing/Sales	37
Customer Support	42
General & Administrative	221
	300

PRODUCTS AND SERVICES

- Safecom provides independent insurance agencies with batch and remote batch processing services. Three services are available.
 - Safecom Management System (SMS) is the basic program, which provides:
 - Itemized weekly summary, by customer, of all accounts carrying balances.
 - Customer statements.
 - Monthly accounts receivable information.
 - A list of customers with outstanding balances.
 - Monthly management reports.
 - Agency Analysis System assists the agency in identifying the needs of its customers, and can provide specific information about clients or reveal which clients fit certain criteria. It provides tools for examining internal operations and for market analysis.
 - This program is designed to be used with SMS, and uses the same input as the SMS data base.
 - Direct Bill System is designed to improve the agency's control over direct bill policies. The system helps agents control renewals, verify commissions, obtain complete production information, itemize producer commissions, and identify customers' total activity.
- The Transmission Minicomputer System operates in a remote batch mode.
 - Time critical reports, such as accounts receivable, customer statements, income and expense statements, can be processed and printed in the agency office.
 - Other output provided by the SMS system is generated at the SAFECOM data center.
 - Hardware furnished is a DEC PDP-8 minicomputer with one dual diskette drive. This can be upgraded to a single terminal, stand-alone turnkey system, with the addition of a second dual diskette drive and appropriate software.

©1981 by INPUT. Reproduction Prohibited.

- For law firms, SAFECOM offers the Legal Management System which operates in a batch mode. It provides an automated billing system, accounts receivable control, and case management.

 - Output generated includes:

 . Daily activity report.
 . Billing memorandum.
 . Client statements.
 . Aged accounts receivable.
 . Labels.
 . Customized collection messages.

- As of November 1981, SAFECOM provided processing services to 4,700 clients. Monthly revenues per client range from $83 to $2,000, and average $220 per month.

- Turnkey systems for insurance agents feature DEC hardware and SAFECOM developed AGENA software.

 - AGENA consists of eight software packages that function independently or as part of an integrated system. Packages can be added as needed. They are:

 . Client Information, a policy retrieval system which gives a complete profile of every customer.
 . Pending, which reminds the agent of follow-up dates.
 . Insurance Forms, generates standard forms.
 . Communications Interface, allows an agency's computer to communicate with the computers of insurance companies it represents.
 . Accounting.
 . Word Processing.
 . Marketing, compiles data from existing files for use in expanding accounts and selling new customers.

 - Turnkey systems require the same input procedures and produce reports in the same format as the SMS batch system.

 - Two turnkey models are available. The D-208 is a single station system based on a DEC PDP-8. The D-336 is a multiple station system based on a DEC PDP-11.

 - Turnkey systems range in price from $20,000 to $100,000. There are 400 installations.

INDUSTRY MARKETS

Insurance	95%
Legal	5%

©1981 by INPUT. Reproduction Prohibited.

GEOGRAPHIC MARKETS

U.S.	85%
International	15%

HARDWARE

- Safecom uses the processing facilities of its parent. Safeco's data center is located in Seattle, WA and operates two IBM 3030s.
 - Safecom has data entry centers in Toronto, Canada; Oradell (NJ); St. Louis (MO); Panorama City (CA); and Bellevue (WA).

©1981 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO PROFILE DATED JUNE 1984

SAFEGUARD BUSINESS SYSTEMS, INC.
400 Maryland Drive
Fort Washington, PA 19034
(215) 641-5000

Vincent G. Bell, Jr., Chairman, President, and CEO
Public Corporation, NYSE
Total Employees: 2,150
Total Revenue, Fiscal Year End 12/31/84: $198,689,000
Computer Services and Products Revenue: $61,833,000

SAFEGUARD BUSINESS SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	$198,689	$170,479	$145,021	$135,344	$118,956
. Percent increase from previous year	17%	18%	7%	14%	23%
Income before taxes	$ 21,540	$ 19,606	$ 17,237	$ 16,058	$ 14,074
. Percent increase from previous year	10%	14%	7%	14%	17%
Net income	$ 12,835	$ 11,085	$ 9,270	$ 8,794	$ 7,698
. Percent increase from previous year	16%	20%	5%	14%	19%
Earnings per share	$ 1.05	$ 0.91	$ 0.77	$ 0.73	$ 0.66
. Percent increase from previous year	15%	18%	5%	11%	12%

- In December 1984 Safeguard acquired Office Automation, Inc. (OAI) of Bethesda (MD) for 300,000 shares of common stock. The above financials have been restated to reflect the acquisition, which was accounted for as a pooling of interests.

 - OAI markets and supports microcomputer software and hardware systems primarily to government and Fortune 1000 customers. Sales emphasis has been in the Greater Washington, D.C. area, Maryland, Virginia, and North Carolina.

 - OAI's annual sales are approximately $10 million. The company now operates as a wholly owned subsidiary of Safeguard.

©1985 by INPUT. Reproduction Prohibited.

- Safeguard has established three new operating subsidiaries as follows:
 - Safeguard Business Systems - U.S.A., the largest of the new companies, manufactures and sells both manual and computerized information products and services to over 650,000 small businesses and professionals in the U.S.
 - Safeguard International Company is responsible for all sales outside of the U.S. More than 100,000 customers are served by a network of 200 exclusive Safeguard international distributors and sales representatives.
 - Integrated Computer Products Company consists of three operating units dedicated to serving large businesses and government agencies. Tristar Data Systems and Office Automation provide microcomputer software and hardware systems configured to meet client requirements. Poser Business Forms produces a variety of computer forms for large businesses.
- Revenue for the three months ending March 31, 1985 was $52.5 million, a 6% increase over $49.5 million for the same period in 1984. Net income was $3.5 million, compared to $3.1 million for the first quarter of 1984.

SOURCE OF REVENUE

- A three-year summary of source of revenue, as reported by Safeguard, follows ($ thousands):

	1984	1983	1982
Manual products	$136,856	$127,925	$109,398
Computer services and products	61,833	42,554	35,623
	$198,689	$170,479	$145,021

- Of the $61.8 million in computer services and products revenue generated during 1984, approximately 37% was derived from batch processing services, 33% from turnkey systems, and 30% from computer forms.

©1985 by INPUT. Reproduction Prohibited.

SAFEGUARD BUSINESS SYSTEMS, INC.
400 Maryland Drive
Fort Washington, PA 19034
(215) 641-5000

Vincent G. Bell, Jr., Chairman,
President, and CEO
Public Corporation, NYSE
Total Employees: 2,100
Total Revenue, Fiscal Year End
12/31/83: $168,116,000
Computer Services and Products
Revenue: $40,191,000

THE COMPANY

- Safeguard Business Systems, Inc. was formed in March 1980 as a spinoff from its former parent, Safeguard Scientific, Inc. It now operates as an independent public corporation trading on the New York Stock Exchange.

- Safeguard's primary business is the design and marketing of manual one-write accounting and filing systems and the manufacture and distribution of business forms. The company's computer services include providing batch processing services to small- and medium-sized businesses and microcomputer-based turnkey systems to accountants and health care professionals. During 1983 Safeguard also began offering microcomputer training services. Safeguard currently provides products and/or services to over 725,000 clients worldwide.

- Acquisitions made by Safeguard during 1983 include the following:

 - In May 1983 Safeguard acquired National Training Systems, Inc. (NTS), located in Santa Monica (CA), for 150,000 shares of common stock.

 . NTS specializes in providing microcomputer training materials and seminars.

 . NTS now operates as a wholly owned subsidiary of Safeguard.

 - In October 1983 Safeguard acquired TriStar Data Systems, Inc., located in Cherry Hill (NJ). TriStar, a distributor of microcomputers to Fortune 2000 companies, now operates as a wholly owned subsidiary of Safeguard.

 - In December 1983 Safeguard acquired Mardan Business Systems, Ltd., located in Waterloo, Ontario, for 270,000 shares of common stock.

 . Mardan, a 17-year-old Canadian firm, provides manual information and filing systems and microcomputer-based health care systems to Canadian and U.S. clients.

© 1984 by INPUT. Reproduction Prohibited.

- Mardan now operates as a wholly owned subsidiary of Safeguard.

- 1983 revenue reached $168.1 million, a 17% increase over $144.2 million in 1982. Net income rose 19% from $9.2 million to $11 million. In the five-year summary that follows, financials have been restated to reflect the acquisitions of NTS and Mardan, which were accounted for as poolings of interests. The TriStar acquisition was accounted for as a purchase and did not have a material effect on the operating results.

SAFEGUARD BUSINESS SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1983	1982	1981	1980	1979
Revenue	$168,116	$144,152	$135,144	$118,956	$97,029
. Percent increase from previous year	17%	7%	14%	23%	N/A
Income before taxes	$ 19,510	$ 17,186	$ 16,050	$ 14,074	$ 12,007
. Percent increase from previous year	14%	7%	14%	17%	N/A
Net income	$ 11,009	$ 9,230	$ 8,787	$ 7,698	$ 6,459
. Percent increase from previous year	19%	5%	14%	19%	N/A
Earnings per share (a)	$ 0.93	$ 0.78	$ 0.75	$ 0.66	$ 0.59
. Percent increase from previous year	19%	4%	14%	12%	N/A

(a) Restated to reflect a three-for-two stock split effective October 1983.

- As a result of the NTS and Mardan acquisitions, revenue and net income increased $7.1 million and $36,000 (respectively) in 1982, and $7.1 million and $34,000 (respectively) in 1981.

- Safeguard management attributes revenue growth to the addition of over 145,000 new users in 1983 and increased customer response to the company's expanded line of manual and computer-based products.

 - As a result of an expanded distributor sales force and product line, real growth in revenue increased in 1983 to 14%, from 2% in 1982 and 11% in 1981, after adjusting for price increases of 3%, 5%, and 7% in 1983, 1982, and 1981, respectively.

- The company spent approximately $1.8 million in 1983 for the development and enhancement of software used in connection with its data processing

© 1984 by INPUT. Reproduction Prohibited.

services and for the testing of its microprocessor-based turnkey products. Research and development expenditures in each of the last three years were less than 1% of total revenue.

- In April 1983 Safeguard finalized the formation of a joint venture with PCM FIDUS, a Paris-based firm that markets manual business management systems in France.

 - The new company, P.C.M.-S.A., headquartered in Paris, will offer a combination of PCM-FIDUS's existing product line and Safeguard's manual products modified for use in the French market.

- As of December 31, 1983, Safeguard had 2,100 employees. There are currently 2,200 employees, segmented approximately as follows:

Data processing services	500
One-write systems	1,300
Business forms	300
Administration	100
	2,200

- Safeguard's principal competitors by product/service include the following:

 - Batch processing services: Competitors for services to accountants include the Accounting Corporation of America and Automatic Data processing (ADP). Payroll services competitors include ADP and PAYCHEX. Health care services competitors are regionalized, with no single company competing on a national level.

 - Turnkey systems: Competitors for accountant systems include Accountants' Microsystems, Inc.

 - Educational systems and services: Tratec (McGraw-Hill).

KEY PRODUCTS AND SERVICES

- A three-year summary of source of revenue, as reported by Safeguard, follows ($ thousands):

	1983	1982	1981
Manual products	$ 127,925	$ 109,398	$ 104,457
Computer services and products	$ 40,191	$ 34,752	$ 30,687
Total	$ 168,116	$ 144,152	$ 135,144

© 1984 by INPUT. Reproduction Prohibited.

- Seventy-six percent of Safeguard's 1983 revenue was derived from manual products for basic accounting and recordkeeping functions.
 - The company markets manual "one-write" recordkeeping systems, where a single entry on the top form produces the same entry in the appropriate positions on the forms beneath. The systems are used by a broad range of businesses for such basic accounting and recordkeeping functions as recording cash receipts and disbursements, payroll, accounts payable, accounts receivable, time control, and job cost information.
 - In 1983 the company began marketing a manual color-coded filing system.
 - The company adds new one-write customers at the average rate of approximately 13,000 per month, while retaining nearly 90% of its existing base.
 - Safeguard also manufactures, prints, and markets a variety of business forms. In 1983 the company began marketing a line of computer forms designed to be compatible with a variety of microcomputer systems.
- Of the $40.2 million in computer services and products revenue generated during 1983, the majority was derived from batch processing services and turnkey systems. A smaller percentage was derived from educational products and services and computer forms.
- Safeguard's batch processing services include the following:
 - The Financial Reporting Program enables accountants to receive client information, prepare and organize a manual one-write system, and then give it to a Safeguard data center, which uses it as input to produce computerized financial reports.
 - Introduced in 1964, the system is currently used by over 7,000 accounting firms and 40,000 clients.
 - Basic system reports include balance sheet, earnings statement, and general ledger.
 - Optional reports include schedules, cumulative general ledger, statement of changes, summary cash flow, comparative earnings, departmentals, journal listings, accountant report letters, and payroll tax reporting.
 - Monthly fees range from $15 to $125, with an average fee of $50.
 - The Medical Practice System (MPS) for physicians and Dental Practice System (DPS) for dentists provide patient and financial information

© 1984 by INPUT. Reproduction Prohibited.

controls, generate patient ledgers and billing statements to help increase collections, and provide chronological records of all transactions and treatments for each patient or family.

. There are currently over 2,000 practices using these services.

. A variety of management reports are generated, including:

- Day sheet summaries.
- Activity rejection reports.
- New accounts, changes, and deletions.
- Insurance reports.
- Accounts receivable ledger.
- Missed payments.
- Monthly recall listing and notices.
- Practice management summaries.
- Practice profiles.
- Year-to-date payments.

. Monthly fees average $250 to $300.

- The Professional Timekeeping Service (PTS) is designed to help accountants, engineers, architects, law firms, and other professionals keep accurate records of time spent with clients and then generate bills and accounts receivable records for that time.

. Introduced in 1979, there are currently over 200 users.

. Basic reports include client billing ledger, employee productivity summary, and accounts receivable.

. Optional reports include service reports, month-by-month trend or history reports, employee reports, client summary reports, and lists.

. Monthly fees average $200.

- Computerized payroll processing, introduced in late 1979, is used by 3,000 small businesses and professionals.

. The client provides appropriate payroll data over the phone to one of seven Safeguard Computerized Payroll Service Centers. For large payrolls a messenger will pick up a payroll worksheet at the client's office.

- U.S. payroll data centers are located in Burlingame (CA), Elmhurst (IL), New York City, Tampa, and Los Angeles.

- Two data centers are located in the U.K.

© 1984 by INPUT. Reproduction Prohibited.

- Paychecks, payroll register reports, tax reports, and new worksheets are delivered by messenger the next work day.

- Other reports such as payroll department summaries, year-to-date, employee lists, labor distribution, earnings records, quarterly taxable wages, union reports, deductions, W-2s, 1099s, and 941s are also available.

- During 1983 Safeguard introduced its Dimension Microcomputer System with software programs designed for the health care and accounting markets. Over 130 of these Altos-based microcomputer turnkey systems are currently installed.

 - Turnkey systems for accountants use Accountant Management System software developed by Safeguard.

 - The basic ("write up") system is priced at $1,800 and provides reports for general ledger, journal listing, working trial balance, earnings statements, and balance sheet. Also included are reports for departmental earnings and consolidations, comparative statements of earnings, cumulative general ledger, statements of changes in financial position, cash flow, schedules, and payroll taxes.

 - The write-up system with a report writer is priced at $3,150. If purchased separately, the report writer is $1,975.

 - Optional software is currently available as follows:

 - Payroll is priced at $500.

 - Professional Time and Billing is priced at $2,150.

 - Critical Dates is priced at $625.

 - Safeguard also distributes Lotus Development Corporation's 1-2-3 spreadsheet product and MicroPro's WordStar.

 - There are currently 100 accountant systems installed.

 - The turnkey system for physicians, dentists, and chiropractors is priced at $5,700. An optional query report writer is available for $1,200.

 - Applications include day sheet, walk-out superbill statement, third-party insurance billing, monthly billing, clinical notes, practice parameters, procedure code files, adjustment and other codes, contract billing, finance charges, and patient and family records.

© 1984 by INPUT. Reproduction Prohibited.

 - Additional features for physicians include diagnostic codes. The dental system includes preparation of pre-authorization insurance forms.
 - The system produces management reports for missed payments, patient and family history, and recall reminders.
 - Patient information and reporting is available for not in recall, day sheet reports, deposit slip, credit balance, small balance write-off, inactive accounts, age analysis, payment and/or adjustment analysis, referrals, practice management summary, production and receivables analyses, and activity totals.
 - There are currently 30 health care Dimension systems installed.

- In March 1983 Safeguard was appointed a value-added remarketer by IBM to distribute its line of personal computers using software developed by Safeguard.
 - In the second quarter of 1984 Safeguard introduced a natural language-based cash management system for small businesses that runs on the IBM PC and XT.
 - A fully-integrated line of accounting applications for small businesses will be available on the IBM PC and XT by the end of 1984.
 - The Altos system for accountants was modified to run on the IBM PC and XT and was introduced in May 1984. The health care system conversion to the IBM PC and XT is underway and will be introduced in late 1984.
- TriStar Data Systems, Inc., Safeguard's newly acquired subsidiary, distributes a variety of microcomputers to Fortune 2000 corporations and the federal government.
- Safeguard provides educational software and professional services as follows:
 - National Training Systems (NTS), Inc. provides computer training materials, seminars, and self-study courses to train executives of corporations to become proficient in the use of microcomputers.
 - Topics include Computer Literacy, Putting Lotus™ 1-2-3 to Work, and Getting Ready for Personal Computing.
 - Seminars are generally held at the customer's site or other convenient local sites. Over 1,500 professionals have participated in these programs.
 - NTS also designs custom end user training packages for corporations and hardware and software manufacturers.

© 1984 by INPUT. Reproduction Prohibited.

- In October 1983 Safeguard introduced a series of computer-aided instruction products called LearnWare™ that are designed to instruct microcomputer users in the use of hardware and software applications.
 - The courses consist of an instruction book and software diskette.
 - Five products designed for the IBM PC and XT microcomputers are available as follows:
 - How to Use Your IBM Personal Computer with PC DOS.
 - Training for the WordStar™ Program.
 - Training for the VisiCalc® Program.
 - Managing Your Business with the Lotus™ 1-2-3 Program.
 - Training for IBM PC DOS 2.0.
 - Each LearnWare product is priced at $80. Over 500 have been sold. The products are marketed by Safeguard and TriStar Data Systems.

- In the fall of 1983 Safeguard opened its first Safeguard Business Systems Center in Philadelphia. The Center displays the complete line of Safeguard's products and services, and provides demonstrations and consulting to potential clients. The company plans to open 20 to 30 additional sites during 1984 that will include a number of distributor systems centers.

INDUSTRY MARKETS

- Of the 725,000 Safeguard clients, approximately 85,000 are from the health care industry, 20,000 are lawyers, and 15,000 are accountants. Over 600,000 are small businesses from a variety of industries.

GEOGRAPHIC MARKETS

- Safeguard's fiscal 1983 revenue was derived as follows:

U.S.	91%
Canada	6
U.K.	2
France	1
	100%

- Safeguard's distributor marketing organization is an important factor in the sale of both manual and computer products and services.
 - The company markets all of its one-write systems and related equipment throughout the U.S., Canada, France, and Great Britain via nearly 900 distributors and 250 sales representatives.

© 1984 by INPUT. Reproduction Prohibited.

- Substantially all of the computer products and services are marketed through these distributors. Microcomputer systems are also marketed through TriStar Data. Computer forms are also marketed through independent forms dealers.

- Virtually all of Safeguard's distributors are independent representatives that have agency contracts with Safeguard and are paid on a commission basis.

- Safeguard's Eastern Systems Group operations are headquartered in Blue Bell (PA). Sales offices are located in Atlanta, Boston, Charlotte (NC), Chicago, Columbus (OH), Des Moines, Detroit, Kansas City, Rutherford (NJ), Syracuse, Tampa, Valley Forge (PA), and Washington, D.C.

- Safeguard's Western Systems Group operations are headquartered in Irvine (CA). Sales offices are located in Dallas, Houston, Los Angeles, New Orleans, Phoenix, San Francisco, and Seattle.

- Subsidiary headquarter locations are as follows:

 - National Training Systems, Inc.: Santa Monica (CA).
 - TriStar Data Systems, Inc.: Cherry Hill (NJ).
 - Mardan Business Systems, Ltd.: Waterloo, Ontario, Canada.
 - Safeguard Business Systems GB, Ltd.: Crewe, England.
 - Safeguard Business Systems, Ltd.: Mississauga, Ontario, Canada.

- Foreign sales offices are located in Canada, England, France, and Ireland.

COMPUTER HARDWARE AND SOFTWARE

- Safeguard has nine computer centers and one RJE center in the U.S., as follows:

 - Boston (MA) (RJE center).

 . 1 DEC PDP-11/70, RSTS/E.

 - Burlingame (CA).

 . 1 IBM 4331, DOS/VSE.

 - Corona (CA).

 . Data entry.

 - Costa Mesa (CA).

 . 1 IBM 4341, VM.
 . 1 IBM 4331, DOS/VSE.
 . 1 IBM System 34.

© 1984 by INPUT. Reproduction Prohibited.

- Elmhurst (IL).
 - 1 IBM 4331, DOS/VSE.
 - 1 IBM System 34.
- Fort Washington (PA).
 - 1 IBM 4331, DOS/VSE.
 - 1 DEC PDP-11/70, RSTS/E.
- New York City.
 - 1 IBM System 34.
- Richardson (TX).
 - 1 IBM 4331, DOS/VSE.
- San Leandro (CA).
 - 2 IBM System 34s.
- Tampa (FL).
 - 1 IBM System 34.

- Safeguard also has two payroll processing centers in London and Crewe, England that have Intertec microprocessors.

© 1984 by INPUT. Reproduction Prohibited.

SAFEGUARD BUSINESS SYSTEMS, INC.
400 Maryland Drive
Fort Washington, PA 19034
(215) 641-5000

Vincent G. Bell, Jr., Chairman,
President, and CEO
Public Corporation, NYSE
Total Employees: 1,800
Total Revenue, Fiscal Year End
12/31/81: $128,010,000
Computer Services Revenue:
$16,883,000

THE COMPANY

- Safeguard Business Systems, Inc. (SBS) was formed in March 1980 as a spinoff from its former parent, Safeguard Scientific, Inc. It now operates as an independent public corporation trading on the New York Stock Exchange.

- SBS provides batch-oriented processing services to small- and medium-sized businesses. The company also designs and markets manual, one-write accounting and recordkeeping systems, and manufactures and distributes business forms. SBS is developing microcomputer-based systems for use in small business, accounting, and health care offices, scheduled for availability in late 1982.

- 1981 revenue of $128 million represented a 13% increase over 1980 revenue of $112.9 million. Net income reached $8.8 million in 1981, a 17% increase over 1980 net income of $7.5 million. A five-year financial summary follows:

©1982 by INPUT. Reproduction Prohibited.

SAFEGUARD BUSINESS SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1981	1980	1979	1978	1977
Revenue	$ 128,010	$ 112,907	$ 92,308	$ 68,421	$ 55,573
. Percent increase from previous year	13%	22%	35%	23%	24%
Income before taxes and extraordinary item	$ 16,003	$ 13,808	$ 11,847	$ 9,506	$ 6,762
. Percent increase from previous year	16%	17%	25%	41%	30%
Net income	$ 8,753	$ 7,513	$ 6,309	$ 4,736	$ 3,431
. Percent increase from previous year	17%	19%	33%	38%	29%
Earnings per share	$ 1.17	$ 1.01	$ 0.89	$ 0.67	$ 0.48
. Percent increase from previous year	16%	13%	33%	40%	26%

- Although more than 130,000 new customers were added as planned during 1981, the average value of new orders was less than expected. Management believes its customers have been severely affected by the recession and have reacted to the continuing high inflation and interest rates by postponing initial buying decisions, delaying reorders, and ordering in smaller quantities.

- During 1980, SBS closed the operation of an unprofitable mail-order catalog business. In the first quarter of 1981, the company sold American General Business Systems, a division involved in the sale of specialized forms for credit unions.

- The company spent approximately $1.1 million in 1981 for the development and enhancement of software used in connection with its data processing services. Research and development expenditures in each of the last three years were less than 1% of total revenue.

- Effective April 1982, the company restructured its organization into the U.S. Systems Group and Safeguard Systems and Forms International, a newly formed, wholly owned company.

 - The U.S. Systems Group is responsible for marketing manual and automated services and turnkey systems in the United States.

 - Safeguard Systems and Forms International is responsible for domestic and international marketing of business forms and international marketing of all other Safeguard products and services.

©1982 by INPUT. Reproduction Prohibited.

- As of December 31, 1981, SBS had approximately 1,800 employees. There are currently the same number of employees, divided as follows:

Data processing services	580
One-write systems	800
Business forms	300
Administration	120
	1,800

- SBS's principal competitors for services to accountants include the Accounting Corporation of America and Automatic Data Processing (ADP). Payroll services competitors include ADP and PAYCHEX. Health care services competitors are regionalized, with no single company competing on a national level.

KEY PRODUCTS AND SERVICES

- One hundred percent of SBS's 1981 computer services revenue was derived from batch processing.

- 1981 data processing revenue of $16.9 million represented a 19% increase over 1980 revenue of $14.2 million. A three-year summary of revenue by product line follows:

SBS
THREE-YEAR PRODUCT LINE SUMMARY

ITEM \ FISCAL YEAR	1981	1980	1979
Data Processing	$16,883	$14,186	$10,344
. Percent increase over previous year	19%	37%	78%
One-write Systems	$93,034	$80,380	$64,575
. Percent increase over previous year	16%	24%	29%
Business Forms	$18,093	$18,341	$17,389
. Percent increase (decrease) over previous year	(1%)	5%	37%
TOTAL	$128,010	$112,907	$92,308

- Noncomputer services revenue is defined as follows:

 - One-write systems are manual recordkeeping systems where a single

©1982 by INPUT. Reproduction Prohibited.

entry on the top form produces the same entry in the appropriate positions on the forms beneath. The systems are used by a broad range of businesses for such basic accounting and recordkeeping functions as recording cash receipts and disbursements, payroll, accounts payable, accounts receivable, time control, and job cost estimation.

- SBS's business forms operations consist of the manufacturing, printing, and marketing of a variety of business forms. In 1982 the company began the test marketing of short run continuous forms and predesigned forms for use with a variety of microcomputers and software systems.

- Safeguard's batch processing services include:

 - The Financial Reporting Program enables accountants to use information provided by a one-write system to prepare a client's financial statement.

 . Introduced in 1964, the system is currently used by over 8,000 accounting firms.

 . Basic system reports include balance sheet, earnings statement, and general ledger.

 . Optional reports include schedules, cumulative general ledger, statement of changes, summary cash flow, comparative earnings, departmentals, journal listings, accountant report letters, and payroll tax reporting.

 - The Medical Practice System (MPS) and Dental Practice Systems (DPS) generate patient billing statements and accounts receivables for the doctor and dentist.

 . There are currently over 1,800 practices using these services.

 . A variety of management reports are generated, including:

 - Day sheet summaries.
 - Activity rejection reports.
 - New accounts, changes, and deletions.
 - Insurance reports.
 - Accounts receivable ledger.
 - Missed payments.
 - Monthly recall listing and notices.
 - Practice management summaries.
 - Practice profiles.
 - Year-to-date payments.

 - The Computerized Professional Timekeeping System is designed for accountants, engineers, architects, law firms, and other professionals who account for billable time.

©1982 by INPUT. Reproduction Prohibited.

 - . Introduced in 1979, there are currently over 200 users.
 - . Basic reports include client billing ledger, employee productivity summary, and accounts receivable.
 - . Optional reports include service reports, month-by-month trend or history reports, employee reports, client summary reports, and lists.
- Computerized payroll processing, introduced in late 1979, is used by 1,800 small businesses and professionals.
 - . The client provides appropriate payroll data over the phone to one of six Safeguard Computerized Payroll Service Centers. For large payrolls a messenger will pick up a payroll worksheet at the client's office.
 - . Paychecks, payroll register reports, tax reports, and new worksheets are delivered by messenger the next work day.
 - . Other reports such as payroll department summaries, year-to-date, employee lists, labor distribution, earnings records, quarterly taxable wages, union reports, deductions, W2s, 1099s, and 941s are also available.

- In June 1982, SBS began test marketing a hand-held computer payroll system.
 - The system consists of a SHARP PC 1500 hand-held calculator, programmed to calculate payroll data for up to 40 employees.
 - Employee information on salary rates and exemptions is stored in the system by employee number. By entering hours worked, the system computes gross pay, taxes, deductions, and net pay. The bookkeeper can use this information to manually prepare payroll checks.
 - Priced at under $1,000, the system is scheduled for availability in late 1982.
- SBS is developing several turnkey systems based on the Altos microcomputer.
 - A system for accountants will offer client write-up (general ledger), word processing, depreciation and amortization, after-the-fact payroll, and electronic worksheet programs for modeling and forecasting. Scheduled for introduction in late 1982, the system will range in price from $12,000 to $20,000.
 - A standalone system for doctors and dentists is in the development and initial test stages.
 - . Applications currently offered from MPS and DPS batch ser-

©1982 by INPUT. Reproduction Prohibited.

 - Applications currently offered from MPS and DPS batch services, as well as third-party insurance processing, will be available.
 - A specialized package for chiropractors is also being designed.
 - Scheduled for introduction in the fourth quarter of 1982, the system will range in price from $15,000 to $20,000.

- A third turnkey system will provide basic accounting functions to the general businesses market.
 - The system will include general ledger, accounts payable and receivable, inventory control, sales analysis, and order entry applications.
 - Available on a selective market basis in late 1982, the system will range in price from $10,000 to $12,000.

- The company's distribution marketing organization is an important factor in the sale of one-write systems and data processing services. SBC markets all of its one-write systems and most of its batch processing through nearly 700 distributors.
 - Virtually all of SBS's distributors are independent representatives who have agency contracts with SBS and are paid on a commission basis.
 - Sales support for distributors is supplied through 20 regional offices in the U.S., Canada, and Great Britain.

INDUSTRY MARKETS

- The company markets its computer services to accountants (57% of revenue) and to doctors and dentists (21% of revenue). The remaining 22% of revenue is derived from lawyers, small businesses, and other commercial clients.

GEOGRAPHIC MARKETS

- SBS estimates that 1981 revenue was derived as follows:

United States	94%
Canada	4
United Kingdom	2
	100%

- SBS maintains regional offices in Atlanta, Boston, Chicago, Costa Mesa, Los Angeles, San Francisco, Dallas, Philadelphia, Montreal, Toronto, Vancouver, and Winnipeg.

©1982 by INPUT. Reproduction Prohibited.

COMPUTER HARDWARE AND SOFTWARE

- SBS has nine computer centers and one RJE center:
 - Boston, Massachusetts (RJE center).
 - 1 DEC PDP-11/70, RSTS/E.
 - Burlingame, California.
 - 1 IBM 4331, DOS/VSE.
 - Costa Mesa, California.
 - 1 IBM 4341, VM.
 - 1 IBM 4331, DOS/VSE.
 - Elmhurst, Illinois.
 - 1 IBM 4331, DOS/VSE.
 - 1 IBM System 3, SCP.
 - Fort Lauderdale, Florida.
 - 2 Intertec microprocessors.
 - Fort Washington, Pennsylvania.
 - 1 IBM 4331, DOS/VSE.
 - 1 DEC PDP-11/70, RSTS/E.
 - New York City.
 - 2 Intertec microprocessors.
 - Richardson, Texas.
 - 1 IBM 4331, DOS/VSE.
 - San Leandro, California.
 - 1 IBM System 3, SCP.
 - Tampa, Florida.
 - 1 IBM System 3, SCP.

©1982 by INPUT. Reproduction Prohibited.

SAFEGUARD BUSINESS SYSTEMS, INC.
400 Maryland Drive
Ft. Washington, PA 19034
(215) 641-5000

Robert J. Hill, President
Public Corporation, NYSE
Employees: 1,800
Total Revenues, Fiscal Year End 12/31/79: $92,317,000
Computer Services Revenues: $11,078,000

THE COMPANY

- In October 1979, a plan was approved to spin-off Safeguard Business Systems, Inc. (SBS) from its parent, Safeguard Industries, Inc. It now operates as an independent public corporation trading on the NYSE. This was accomplished in March 1980 when 95% of SBS' outstanding common stock was distributed to the parent's shareholders on a one-for-one basis.

- SBS is engaged in the development, production, and sale of information systems for small- and medium-sized businesses. Sixty-nine percent of the company's 1979 revenues ($92 million) were derived from manual, one-write accounting and recordkeeping systems, 19% from the manufacture and distribution of paper forms, and 12% from batch-oriented computer services.

 - A five-year financial summary of the company is given below:

SAFEGUARD BUSINESS SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ Thousands, Except Per Share Data)

ITEM \ FISCAL YEAR	1979	1978	1977	1976	1975
Total Revenue	$92,317	$68,436	$55,625	$44,859	$35,667
. Percent increase from previous year	35%	23%	24%	26%	-
Income Before Taxes	$12,038	$ 9,614	$ 6,835	$ 5,252	$ 3,802
. Percent increase from previous year	25%	41%	30%	38%	-
Net Income	$ 6,405	$ 4,789	$ 3,467	$ 2,698	$ 1,957
. Percent increase from previous year	34%	38%	29%	38%	-
Earnings Per Common Share	$ 1.36	$ 1.02	$ 0.73	$ 0.57	$ 0.41
. Percent increase from previous year	33%	40%	28%	39%	-

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- The company is organized into the Systems Group and the Business Forms Group.

 - The Business Forms Group is divided into two divisions:

 . Poser Business Forms is the name under which the company markets its business forms to independent dealers primarily in the Southeastern U.S. The company prints and sells these forms to dealers who resell them to customers.

 . American General Business Systems, based in Los Angeles, manufactures and sells specialized forms to credit unions. This division uses a small, direct sales force.

 - The Systems Group provides both manual, one-write systems and computer services.

 . One-write systems are manual recordkeeping systems where a single entry on the top form produces the same entry in the appropriate positions on the forms beneath. The systems are used by a broad range of businesses for such basic accounting and recordkeeping functions as recording cash receipts and disbursements, payroll, accounts payable, accounts receivable, time control, and job cost estimation.

 . SBS believes it is the leader in the one-write market in the U.S. Its five principal competitors are:

 - Reynolds and Reynolds Company.
 - National Business Systems Association, Inc.
 - Burroughs Corporation.
 - Shaw-Walker Company.
 - McBee Systems (Litton Industries).

 . Computer services are provided mainly to accountants and their clients, and to dental and medical practitioners. These services consist of both the recording and summarizing of financial data, as well as the production of related journals, general ledgers, financial statements, and other management reports.

 . In the computer services area, SBS competes with ADP and numerous other firms providing batch processing, payroll, and accounting services.

 . Data is usually sent by the customers via mail, or is physically delivered to an SBS data processing center or RJE terminal

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

facility. Payroll processing information is input by voice over the phone.

- Approximately 800 employees are engaged in the manufacture and distribution of one-write systems, 550 employees are engaged in providing data processing services, and the remaining 450 are engaged in other business form activities. Overall, the company employs 1,800 people.

- The company's major strength is its distribution network. There are 526 Safeguard distributors which handle the company's products exclusively.

 - There are three kinds of distributors:

 . Sixty-six have geographic exclusivity.

 . Two hundred forty-one are metro distributors and have account protection, but not exclusive geographic territories. Account protection prevents another distributor in a given geographic area from servicing the same customers.

 . Two hundred nineteen associates work for, and have their commissions (after override) paid by, either a metro or geographic distributor.

 - Field support for distributors is supplied through 24 regional offices, and seven divisional offices in the U.S., Canada, and Great Britain. Specialists are available in the areas of health care, accounting, and general markets.

 - Total distributor commissions paid in 1979 amounted to $1.36 million, up 24% over 1978.

 - SBS has successfully used this distribution network to reach nearly 500,000 customers in the U.S., Canada, and Great Britain. Eighty percent of these have 10 employees or less. Last year, SBS added an average of nearly 10,000 new customers a month.

 . A typical customer order may be as low as $150.

 - SBS plans to leverage this distribution network and customer base into a successful, small business computer activity, possibly using commercially available personal or microcomputers as a vehicle for distributing proprietary financial software to very small businesses.

 . SBS presently has an R&D facility in Richmond (VA) charged with the task of developing a transportable language which would allow financial software to be sold for use on any small computer.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

. Some computerized data processing programs are now being marketed (revenues negligible), and will continue to be marketed in the future under separate contracts with one-write distributors.

KEY PRODUCTS AND SERVICES

- Virtually all of SBS's computer services revenues come from batch processing. An insignificant amount comes from the sale of software products through one-write distributors.

- New data processing services introduced in 1979 include computerized billing and control systems for physicians and dentists, a time control system for professionals, and a payroll processing system.

- Major software systems include:

 - Financial Reporting Program - marketed primarily to accountants and their clients. It provides general ledger reports.

 - Medical Practice Systems - (introduced in 1979) generates patient billing statements, insurance claims forms, and financial management reports from the one-write documents prepared in the physician's office.

 - Dental Practice Systems - similar to Medical Practice Systems but only offered in the Western part of the U.S. It will be introduced nationally late in 1980 or in 1981.

 - Professional Timekeeping - prepares management reports from the professionals' one-write manual input. Reports include a breakdown of billable and non-billable time, staff productivity, and accounts receivable aging.

 - Safeguard Computerized Payroll System - introduced in Chicago during 1979. System input is by phone to a local Safeguard payroll center. Delivery of payroll checks and reports is made the following day by courier. The next center is due to be opened in San Francisco in 1980.

INDUSTRY MARKETS

- The company markets its computer services mainly to accountants (85% of revenues), and doctors and dentists (15% of revenues). The company plans to expand its efforts in these two markets. Payroll processing services will grow from a 5% share of revenues across all industries.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- The company is the leader in selling manual systems to the legal profession. It is reasonable to expect that computerized services will soon be directed at that market segment also.

GEOGRAPHIC MARKETS SBS's primary market is within the U.S. International revenues are derived from Canada and Great Britain.

COMPUTER HARDWARE

- SBS has both East Coast (Ft. Washington, PA) and West Coast (Costa Mesa, CA) computer centers. The Costa Mesa center has two IBM 370/148s, and the Ft. Washington center has one IBM 370/155.
- There are also five RJE centers located in:
 - Boston (MA).
 - Chicago (IL).
 - Dallas (TX).
 - San Francisco (CA).
 - Tampa (FL).

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

SAGE SOFTWARE, INC.
3200 Tower Oaks Boulevard
Rockville, MD 20852
(301) 230-3200

Kevin J. Burns, President and CEO
Public Corporation, NASDAQ
Total Employees: 180 (12/90)
Total Revenue, Fiscal Year End
4/30/90: $26,458,593

The Company

Sage Software, Inc. develops, markets, and supports computer-aided software engineering (CASE) development tools for IBM-based business information systems. Sage products can be configured for mainframes (MVS), PCs, or local-area networks.

- Sage Software's strategy is to provide customers with best-in-class products compliant with IBM's AD/Cycle standards.
- The company also has alliances with various third-party software suppliers, including Micro-Focus, XDB Systems, LBMS, KnowledgeWare, Index Technology, and Asyst. Sage provides product interfaces to these vendors' complementary products in order to provide users with tools tailored to meet their specific business objectives.

Acquisitions made by Sage Software include the following:

- In October 1989, Sage Software acquired Dan Bricklin's Demo II program from Peter Norton Computing, Inc. Demo II is a PC-based prototyping tool.
- In July 1989, Sage Software purchased Visual Software, Inc. of Santa Clara (CA) for 151,666 shares of Sage common stock (valued at $1.2 million). Visual Software developed and marketed PC-based application development tools used during the design phase of development.
- In July 1989, Sage Software acquired the Plink86+ software product from Phoenix Technologies, Inc. Plink86+ is an overlay linker for applications programmers.
- In April 1989, Sage Software acquired Polytron Corporation of Beaverton (OR) for approximately one million shares of Sage common stock (valued at $8.5 million). Polytron developed and marketed source control and configuration management tools. The acquisition was accounted for as a pooling of interests.

Copyright 1990 by INPUT. Reproduction Prohibited.

Fiscal 1990 revenue reached $26.5 million, a 26% increase over fiscal 1989 revenue of $21.1 million. Net income rose 106%, from $1.7 million to $3.5 million. In the five-year summary that follows, financials prior to fiscal 1990 have been restated to reflect the pooling-of-interests acquisition of Polytron.

SAGE SOFTWARE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	4/90	4/89	4/88	4/87	4/86
Revenue	$26.5	$21.1	$16.7	$15.7	$10.4
• Percent increase from previous year	26%	26%	6%	51%	83%
Income before taxes	$5.1	$2.6	$2.7	$3.4	$2.1
• Percent increase (decrease) from previous year	96%	(4%)	(21%)	62%	99%
Net income	$3.5	$1.7 (a)	$1.8	$1.8	$1.2
• Percent increase (decrease) from previous year	106%	(6%)	--	50%	N/A
Net earnings per share	$0.55	$0.28 (a)	$0.29	$0.41	$0.35
• Percent increase (decrease) from previous year	96%	(3%)	(29%)	17%	N/A

(a) Includes $1.1 million, or $0.12 per share in nonrecurring costs and other charges associated with the merger of Polytron.

Sage Software management attributed revenue growth in fiscal 1990 to an increased demand for the company's PC-based products, increased sales coverage, and a broadening of the company's product offerings.

- For fiscal 1990, license fee revenues from PC products grew 98% and mainframe products declined 25%. This shift follows the market trend away from the use of mainframes in favor of desktop development using PCs and LANs. For fiscal 1990, 71% of license fee revenue was derived from PC-based products and 29% was derived from mainframe-based users. These percentages compare to 65% mainframe and 35% PC in fiscal 1989 and 87% mainframe and 13% PC in fiscal 1988.

Copyright 1990 by INPUT. Reproduction Prohibited.

- During fiscal 1990, new regional sales offices were opened in the New York metropolitan area, Irvine (CA), and Toronto (Canada). Internationally, the company expanded its third-party network to 55 dealers/distributors located in 22 countries.

- New products accounted for 11% of license fee revenue for fiscal 1990.

Product development and support expenses were approximately $6.2 million (23% of revenue) in fiscal 1990, compared to $4.8 million (23% of revenue) in fiscal 1989, and $4.3 million (31% of revenue) in fiscal 1988.

Revenue for the six months ending October 31, 1990 reached $13.9 million, a 27% increase over $10.9 million for the same period in 1989. Net income rose 35%, from $815,000 to nearly $1.1 million. Results were attributed to a strong demand for the company's products in North America.

As of April 30, 1990 Sage Software had 161 employees (generating $164,333 in revenue per employee), segmented as follows:

Sales and support	72
Research, development, and technical support	71
General and administrative	18
	161

The company currently has 180 employees.

Sage Software's primary competitors are KnowledgeWare and Pansophic Systems.

Key Products and Services

One hundred percent of Sage Software's revenue is derived from its CASE software product licenses, maintenance fees, and royalties. A further breakdown of source of revenue is estimated as follows:

Copyright 1990 by INPUT. Reproduction Prohibited.

SAGE SOFTWARE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	4/90		4/89		4/88	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
End-user revenue						
• Licenses	$22.8	83%	$18.5	88%	$12.7	76%
• Maintenance fees	3.7	17%	2.6	12%	0.9	6%
Royalties						
• Remote computing	--	--	--	--	2.8	16%
• Software vendor licensing	--	--	--	--	0.3	2%
TOTAL	**$26.5**	**100%**	**$21.1**	**100%**	**$16.7**	**100%**

Sage currently markets 17 primary products that address application development primarily in the areas of application generation and configuration management.

- As of April 1990, Sage Software's products were supporting 75,000 developers at 9,000 customer sites worldwide, compared to 40,000 developers at 4,000 customer sites as of April 1989. The growth has come from internal development efforts and acquisitions.

Application Generation Products:

Sage Software's APS application generators are for project teams developing DB2, IMS, or VSAM applications in COBOL.

- The APS application generators can reside on the mainframe using APS/MVS, or on the PS/2 with the APS/PC Workstation.

- APS operates as a standalone system or "CASE connected" using KnowledgeWare's IEW or Index Technology's Excelerator design products.

- APS includes three development facilities (which can be used separately or on an integrated basis) plus a Customization Option.

 - The APS/Application Painter is for programmers and

Copyright 1990 by INPUT. Reproduction Prohibited.

analysts working with end users in the prototyping phase of application development. It supports three levels of prototyping from simple screen shots to full skeletal applications.

- APS/Online Express is for programmers building on-line, transaction processing applications. It employs a straightforward, fill-in-the-blanks style and generates complete applications without any hand coding.

- The APS/Specification Painter is used by programmers building complex applications using a semi-procedural model.

- The APS Customization Option allows programmers to tune the APS rule base to local standards.

As of April 30, 1990, over 9,000 developers were using Sage Software's APS products at more than 400 customer sites.

Source and Configuration Management Products:

Sage Software's tools in this area automate and track the program source coding process.

- Sage Professional Editor, introduced in March 1990, is a programming editor for C and COBOL developers that includes windowing and built-in mouse support. Versions are available for MS-DOS and OS/2.

- PVCS is a PC and LAN-based configuration management and version control system for developers of PC or mainframe applications. PVCS is available for MS-DOS, OS/2, and AIX environments.

- PolyMake can be used separately or in conjunction with PVCS to automatically track which software modules are included in each application system. PolyMake allows programmers to automatically rebuild entire programs when any particular module changes.

In April 1990, Sage Software announced that PVCS, PolyMake, and Sage Professional Editor will all include support for the Microsoft Programmer's WorkBench.

There are currently over 60,000 developers at 6,000 sites using Sage Software's source and configuration management products.

Copyright 1990 by INPUT. Reproduction Prohibited.

Support services provided by Sage Software include the following:

- Maintenance and enhancement services to licensed customers are provided at no charge during the initial year for mainframe products and during an initial 90 days for PC products. Thereafter, annual maintenance contracts are available for 15% of the current license fees.
- Sage Software also offers a pay-as-you-go maintenance service for the PC-based products whereby customers may purchase upgrades and use a 900-hotline service.
- Optional training classes are conducted at Sage Learning Centers in Chicago, Los Angeles, New York, Washington, D.C., and Oregon. Courses are also conducted at customer sites. Computer-based training products are also available.
- Sage Software also offers electronic bulletin board and dial-up diagnostic services.

Industry Markets

Sage Software's revenue is derived from clients across industries, including computer, software, and electronics firms; consumer products and retailing; insurance and financial services; banking; federal, state, and local government; manufacturing; transportation; aerospace; and other. Customers include large operations that buy licenses for multiple sites as well as smaller, single-site users.

Geographic Markets

SAGE SOFTWARE, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	4/90		4/89		4/88	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
U.S.	$20.0	76%	$15.0	71%	$14.1	84%
International	6.5	24%	6.1	29%	2.6	16%
TOTAL	$26.5	100%	$21.1	100%	$16.7	100%

Copyright 1990 by INPUT. Reproduction Prohibited.

In North America, Sage Software markets its products via direct sales, telephone sales, and dealers/distributors.

- Sage Software's North American offices are located in Atlanta, Beaverton (OR), Chicago, Hartford (CT), Irvine and Santa Clara (CA), New York, Rockville (MD), and Scarborough (Ontario, Canada).
- Sage currently has six primary dealer agreements for the distribution of Sage products in North America.
- In March 1990, the company entered into an exclusive distribution agreement with Merisel, a distributor with over 4,000 computer and software retailers and 8,000 value-added reseller accounts.
- In April 1990, Sage Software announced a joint marketing agreement with IBM under IBM's Cooperative Software Program whereby IBM will market PolyMake for use with IBM's OS/2, PC-DOS, AIX, and AIX2-based systems.

Outside North America, Sage Software markets its products through dealers and distributors, which are authorized on a country-by-country basis.

- Currently, Sage Software has 55 international distribution/dealer agreements, of which 15 are exclusive by country and 40 are non-exclusive.
- These dealer/distributors operate in 22 countries, including Argentina, Australia, Austria, Belgium, Brazil, Denmark, Finland, France, Hong Kong, Ireland, India, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, the U.K., and West Germany.

Copyright 1990 by INPUT. Reproduction Prohibited.

SAGE SOFTWARE, INC.
3200 Monroe Street
Rockville, MD 20852
(301) 230-3200

Kevin J. Burns, President and CEO
Public Corporation, OTC
Total Employees: 105
Total Revenue, Fiscal Year End
4/30/88: $14,569,558

The Company

Sage Software, Inc. develops, markets, and supports APS Development Center, an integrated family of computer-aided software engineering (CASE) application development tools, to developers of IBM-based business information systems. The company claims to be the only vendor to provide full function support for developing, generating, and testing applications in both the MVS and PC environments.

- Sage Software is the successor to the applications development software business begun in 1981 by Sage Systems, Inc.

- Sage Systems' original business of providing custom application software professional services to the federal government was formed as a separate company, Sage Federal Systems, Inc. (SFSI), and sold to certain officers and shareholders in March 1986 for $180,000.

 - SFSI has a nonexclusive, nontransferable 20-year license to distribute Sage Software's APS Development Center to the federal government.

- In December 1986, Sage Software made an initial public offering of 1.8 million shares of common stock, of which one million shares were sold by the company and 800,000 shares were sold by selling stockholders. Estimated net proceeds to the company were $11 million.

Sage Software's strategy is to continue to be a leading supplier of tools that automate the development of business systems on IBM computers.

- Sage Software management believes in a two-platform development strategy: Mainframe products based on ISPF in a TSO environment, running under MVS; and the use of IBM's PS/2 as a development workstation.

Copyright 1988 by INPUT. Reproduction Prohibited.

- Long-term planning is keyed on IBM's Repository product. Sage Software plans to develop a product that will emulate IBM's Repository.

Fiscal 1988 revenue reached $14.6 million, compared to $14.5 million in fiscal 1987. Net income declined 15%, from $1.8 million in fiscal 1987, to $1.5 million in fiscal 1988. A five-year financial summary follows:

SAGE SOFTWARE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	4/88	4/87	4/86	4/85	4/84
Revenue	$14,570	$14,504	$10,446	$5,722	$2,668
• Percent increase from previous year	--	39%	83%	114%	N/A
Income (loss) from continuing operations before taxes	$2,276	$3,371	$2,133	$1,070	$(415)
• Percent increase (decrease) from previous year	(33%)	58%	99%	358%	N/A
Income (loss) from discontinued operations (a)	--	--	$(296)	$(562)	$365
Net income	$1,513	$1,769	$828	$68	$138
• Percent increase (decrease) from previous year	(15%)	114%	*	(51%)	N/A
Earnings (loss) per share from continuing operations	$0.30	$0.43	$0.35	$0.18	$(0.07)
Net earnings per share	$0.30	$0.43	$0.24	$0.02	$0.04
• Percent increase (decrease) from previous year	(30%)	79%	*	(50%)	N/A

* *Percent change exceeds 1,000%.*

(a) Reflects income/losses associated with Sage Federal Systems, Inc. (SFSI) which was sold in March 1986. SFSI had revenue of approximately $9.4 million, $10.4 million, and $6.1 million for fiscal 1986, 1985, and 1984, respectively.

Copyright 1988 by INPUT. Reproduction Prohibited.

Sage Software management attributed fiscal 1988 results to the following:

- Revenue from the federal government was $4.3 million in fiscal 1988, a 32% decrease from $6.3 million in fiscal 1987.
 - Prior to December 1987, Results, Inc. had exclusive remote computing services rights to offer APS products in North America. In December 1987, Sage Software purchased the exclusive rights from Results for $1.8 million. Results also surrendered its right to offer APS products on a remote computing basis to any customer not under contract as of April 30, 1988.
 - Substantially all of the revenue derived from Results, Inc. related to services provided to the federal government.
 - Revenue derived from Results was approximately $2.8 million in fiscal 1988, compared to $3.3 million in fiscal 1987.
 - A spending freeze order by the Department of Defense has negatively impacted Sage Software's other government market distributor, SFSI.
- Sage Software's operating margins were negatively affected by the decline in federal revenue. Due to certain agreements with Results, the margin of content of this revenue source was much higher than that associated with nonfederal revenue. Therefore, operating income from continuing operations as a percent of total revenue was approximately 10% in fiscal 1988, 21% in fiscal 1987, and 21% in fiscal 1986.
- Sage Software has taken steps to reduce its expenses overall while continuing to make operational investments in its nonfederal revenue channels.

Product development expenses (before the capitalization of software development costs) were approximately $4.6 million (31% of revenue) in fiscal 1988, $4.4 million (30% of revenue) in fiscal 1987, and $2.7 million (26% of revenue) in fiscal 1986.

Revenue for the three months ending July 31, 1988 reached $3.6 million, a 27% increase over $2.8 million for the same period in 1987. Net income declined 55%, from $243,000 last year to $109,000 in the current quarter.

Copyright 1988 by INPUT. Reproduction Prohibited.

- Growth from the international and U.S. commercial markets accounted for over 95% of revenue. Approximately 65% of revenue came from new business, 15% from add-on products, and 20% from maintenance and training services.

- It is anticipated that fiscal 1989 revenue from commercial U.S. and international markets will increase 40% to 50%.

Sage Software has several marketing agreements with other vendors as follows:

- In August 1988 Sage Software signed an agreement with Perot Systems Corporation permitting Perot Systems to market Sage Software's APS products on a nonexclusive basis to the federal government and to provide training and services to APS users in North America.

- In August 1988 Sage Software formed a marketing alliance with Micro Focus Limited. Under the terms of the agreement, Sage Software will sell and provide frontline support for the Micro Focus family of PC-DOS and OS/2 products in conjunction with Sage Software's APS/PC Workstation. Sage Software and Micro Focus will work jointly with large strategic accounts; Micro Focus will provide initial training for Micro Focus products. This agreement covers all Micro Focus products and is worldwide in scope.

- In October 1988 Sage Software announced a marketing agreement with XDB Systems, Inc. of College Park (MD). The agreement permits Sage Software to market XDB Systems' XDB (a data base management system for microcomputers that emulates IBM's DB2) with Sage Software's APS/PC Workstation.

As of April 30, 1988 Sage Software had 105 employees, segmented as follows:

U.S. field sales and support	38
Research, development, and technical support	51
General and administrative	16
	105

Sage Software's primary competitor is Pansophic Systems and its TELON product.

Copyright 1988 by INPUT. Reproduction Prohibited.

Key Products and Services

One hundred percent of Sage Software's revenue is derived from its CASE software product licenses, maintenance fees, and royalties. A further breakdown of source of revenue follows:

SAGE SOFTWARE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	4/88		4/87		4/86	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
End-user revenue						
• Licenses (a)	$10.6	73%	$10.2	70%	$6.6	63%
• Maintenance fees (a)	0.9	6%	0.7	5%	0.5	5%
Royalties						
• Remote computing	2.8	19%	3.3	23%	3.2	31%
• Software vendor licensing	0.3	2%	0.3	2%	0.1	1%
TOTAL	**$14.6**	**100%**	**$14.5**	**100%**	**$10.4**	**100%**

(a) INPUT estimates for fiscal 1988 only.

The APS Development Center is a family of application development tools for developers of COBOL-based batch and on-line systems. These products support the application development process, including physical design, interactive prototyping, application generation, testing, and maintenance.

- Sage Software's APS/MVS Workstation application development tools are designed for IBM and compatible mainframes operating under MVS.
 - In 1988 Sage Software introduced a new version of the APS/MVS Workstation. The mainframe environment is now completely ISPF-based. New prototyping capabilities permit users to simulate live data and show the movement of data from screen to screen. While viewing a prototype, users can dynamically modify screens.
 - As of April 30, 1988 over 4,500 developers were using Sage Software's mainframe products at more than 150 customer sites.

Copyright 1988 by INPUT. Reproduction Prohibited.

- The APS/PC Workstation, announced in July 1988, is a full-function application generator to support the development of COBOL applications from physical design and prototyping, through generation and unit testing, totally independent of the mainframe.
 - Based on IBM's PS/2 and the Micro Focus COBOL/2 Workbench, APS/PC Workstation generates applications for execution in either the PC or the MVS environment.
 - The recommended environment for the APS/PC Workstation is an IBM PS/2 Model 70 or 80, 3 megabytes of extended memory, 640K RAM, a 5-megabyte hard disk, PC DOS 3.3, and the Micro Focus COBOL/2 compiler.
 - Typical configurations range in price from $5,000 to $7,500, depending on the data base and data communications targets chosen.

The APS/PC Workstation and APS/MVS products consist of several components surrounding a centralized application dictionary. These components can be configured to meet specific customer requirements for individual projects or as a complete development center.

- The APS Application Dictionary serves as the data store for the entities and rules required to generate code. It automatically creates documentation and produces a variety of reports.
- The APS Application Painters clarify user requirements and ensure conformance to real-world business goals.
 - The Application Painters create working models of the application system with four interactive tools - Screen, Report Mock-Up, Scenario Prototype, and Data Structure Painters.
 - The Application Painters offer a choice of working "top down" from a system-wide view or "bottom up". Prototyping can occur at three levels: screens, processes, and logical data.
 - Because the Application Painters automatically populate the Application Dictionary, any work done during prototyping is carried through the rest of the development cycle.
- The APS Importers leverage physical design and analysis efforts by extracting information from front-end design tools and

Copyright 1988 by INPUT. Reproduction Prohibited.

existing source code. This information includes data base models, screen designs, and report layouts. The APS Importers stretch APS product coverage into re-engineering as well as new development.

- Sage Software's first Front-End Importer is the Excelerator Integrator. Excelerator is a front-end design tools developed and marketed by Index Technology.

- The APS Logic Painters have a layered architecture that supports simple to very complex application requirements without coding at the native level. The Logic Painters, which reportedly deliver a productivity gain ranging from 8:1 to 12:1, consist of Online Express and Program Painters.

 - Online Express is a nonprocedural "fill-in-the-blanks" approach to completing applications. Online Express enables programmers to specify single function or multiple function programs that use single or multiple screens.

 - The Program Painter is integrated with Online Express. When data management and data communication logic is complex or unique, the Program Painter handles it, saving developers from the free-fall to native DB/DC calls and line-by-line COBOL. The Program Painter consists of a Logical View DB/DC facility, intelligent editor services, and a high-level specification language patterned after COBOL.

- The APS Generators produce clean, efficient DB/DC COBOL applications. They integrate pre-existing information (via the Importers) with the prototype, physical design, and logic specifications to generate 100% of the code required for the DB/DC environment - in top-down, structured, compiler-ready source. APS Generators are available for the following target environments:

 - PC Targets:

 Micro Focus PC-CICS
 Micro Focus PC-IMS DC
 XDB Systems XDB/SQL
 Micro Focus PC-IMS DB
 Micro Focus PC-V-ISAM
 Micro Focus COBOL/2

Copyright 1988 by INPUT. Reproduction Prohibited.

- MVS Targets:

 CICS
 IMS DC
 DB2
 IMS DB
 VSAM
 COBOL and COBOL II
 IDMS

- The APS/DB2 Data Base Painter (DB2P) can be used as an optional, standalone data administration tool for defining DB2 objects or as an integrated tool with other APS Development Center Products for development of DB2 application systems.

 - DB2P provides a "staging area" for defining, storing, and modifying information for the DB2 system catalog. It enables DB2 analysts, programmers, and data base adminstrators to analyze the impact of changes via analysis reports before updating the DB2 system catalog.

 - Column independence provides additional flexibility by eliminating redundant column definition and maintenance.

- APS Link provides APS/PC-to-APS/MVS connectivity. With APS Link, entire applications, specific dictionary entities, and source code can be move with a single keystroke. APS Link allows the user to define work and project groups to facilitate source file maintenance on the PC.

- The optional APS Customization Facility creates usable logic, increasing productivity. The APS Generators operate from a preloaded rule base stored in the Application Dictionary. The Customization Facility allows the user to modify and extend these rules. Once the new rules are entered into the Application Dictionary, they can be invoked by the Logic Painters as an intrinsic part of the development environment.

Sage Software provides the following support services to its clients:

- Implementation planning.
- Training and consulting services.
- Documentation.
- 24-hour 800 answerline.
- APS/LINE newsletter.

Copyright 1988 by INPUT. Reproduction Prohibited.

Industry Markets

Approximately 79% of Sage Software's fiscal 1988 revenue was derived from end users in a range of industries (including 11% from the federal government); 19% was derived from Results, Inc., the company's licensed remote computing services vendor that provided services to the federal government; and 2% was derived from third-party software vendors.

- When Results, Inc.'s client base is factored in, approximately 70% of Sage Software's total fiscal 1988 revenue was derived from commercial clients and 30% was derived from the federal government.

- Sage Software management believes that the deterioration of revenue from federal government sources will continue at an accelerated rate due to the changes in its relationship with Results and in federal government procurement practices. Management's expectation is that revenue from the federal government will not exceed 10% of total revenue in the future.

APS is used by clients in the banking and finance, discrete and processing manufacturing, retail, telecommunications, and transportation industries, as well as state government. Customers include large operations that buy licenses for multiple sites as well as smaller, single-site users.

Clients added during fiscal 1988 include Arbitron (Control Data Corporation), Capitol Records, GTE, Marion Laboratories, MTech, Sovran Financial, Aeritalia, and Barclays Bank.

Geographic Markets

Approximately 82% of Sage Software's fiscal 1988 revenue was derived from the U.S. and 18% from international sources.

A three-year summary of geographic source of revenue follows:

Copyright 1988 by INPUT. Reproduction Prohibited.

SAGE SOFTWARE, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	4/88		4/87		4/86	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
U.S.	$12.0	82%	$12.7	88%	$10.2	98%
International	2.6	18%	1.8	12%	0.2	2%
TOTAL	**$14.6**	**100%**	**$14.5**	**100%**	**$10.4**	**100%**

Sage Software has field sales and support offices in Atlanta, Boston, Chicago, Dallas, Los Angeles, New York, San Diego, and Washington, D.C.

Internationally, Sage Software sells its products through distributors. The company has distributors in Australia, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Norway, Sweden, Switzerland, and the U.K.

Copyright 1988 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO PROFILE DATED MARCH 1987

SAGE SOFTWARE, INC.
3200 Monroe Street
Rockville, MD 20852
(301) 230-3200

Kevin J. Burns, President and CEO
Public Corporation, OTC
Total Employees: 114
Total Revenue, Fiscal Year End
4/30/87: $14,503,552

SAGE SOFTWARE, INC.
FOUR-YEAR FINANCIAL SUMMARY (a)
($ thousands, except per share data)

Item \ Fiscal Year	4/87	4/86	4/85	4/84
Revenue from continuing operations	$ 14,504	$ 10,446	$ 5,722	$ 2,668
. Percent increase from previous year	39%	83%	114%	N/A
Income (loss) from continuing operations before taxes	$ 3,371	$ 2,133	$ 1,070	$ (415)
. Percent increase from previous year	58%	99%	358%	N/A
Income (loss) from discontinued operations (b)	-	$ (296)	$ (562)	$ 365
Net income	$ 1,769	$ 828	$ 68	$ 138
. Percent increase (decrease) from previous year	114%	*	(51%)	N/A
Earnings (loss) per share from continuing operations	$ 0.43	$ 0.35	$ 0.18	$ (0.07)
. Percent increase from previous year	23%	94%	357%	N/A
Net earnings per share	$ 0.43	$ 0.24	$ 0.02	$ 0.04
. Percent increase (decrease) from previous year	79%	*	(50%)	N/A

* Percent change exceeds 1,000%.

©1987 by INPUT. Reproduction Prohibited.

(a) For periods prior to fiscal 1984, the company's current line of business was not material and revenue from that business was insignificant. Accordingly, financial information for prior periods has been omitted.

(b) Reflects income/losses associated with Sage Federal Systems, Inc. (SFSI) which was sold in March 1986 to former officers and shareholders for $180,000. SFSI had revenue of approximately $9.4 million, $10.4 million, and $6.1 million for fiscal 1986, 1985, and 1984, respectively.

- Revenue for the three months ending July 31, 1987 was $2.8 million, a 5% decrease from nearly $3 million for the same period in 1986. Net income was $242,000, compared to $43,000 for the same period a year ago.

SOURCE OF REVENUE

- One hundred percent of Sage Software's revenue is derived from its application development systems software product licenses, maintenance fees, and royalties. A further breakdown of source of revenue follows:

	4/87	4/86	4/85
End-user revenue			
Licenses	70%	63%	54%
Maintenance fees	5	5	8
Royalties			
Remote computing services	23	31	35
Software vendor licensing	2	1	3
	100%	100%	100%

- Approximately 20% of fiscal 1987 revenue was derived from the federal government and 23% from Results, Inc., the company's licensed remote computing vendor.

- Revenues generated through foreign distributors were approximately $1.8 million in fiscal 1987, compared to $190,000 in fiscal 1986.

©1987 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SAGE SOFTWARE, INC.
3200 Monroe Street
Rockville, MD 20852
(301) 230-3200

Kevin J. Burns, President and CEO
Public Corporation, OTC
Total Employees: 118 (10/86)
Total Revenue, Fiscal Year End
4/30/86: $10,446,000

THE COMPANY

- Sage Software, Inc. develops, markets, and supports an integrated family of computer-aided software engineering (CASE) application development tools for IBM and compatible mainframes. The company also derives royalty revenue from the licensing of its products to remote computing services and software vendors.

 - Sage Software is the successor to the applications development software business begun in 1981 by Sage Systems, Inc.

 - Sage Systems' original business of providing custom application software professional services to the federal government was formed as a separate company (Sage Federal Systems, Inc.) and sold to certain officers and shareholders in March 1986.

- In December 1986, Sage Software made an initial public offering of 1.8 million shares of common stock of which one million shares were sold by the company and 800,000 shares were sold by selling stockholders. Estimated net proceeds to the company of $11 million will be used for general corporate purposes.

- Fiscal 1986 revenue reached $10.4 million, an 83% increase over fiscal 1985 revenue of $5.7 million. Net income grew from $68,000 in fiscal 1985 to $828,000 in fiscal 1986. A three-year financial summary follows:

©1987 by INPUT. Reproduction Prohibited.

SAGE SOFTWARE, INC.
THREE-YEAR FINANCIAL SUMMARY (a)
($ thousands, except per share data)

ITEM \ FISCAL YEAR	4/86	4/85	4/84
Revenue from continuing operations	$ 10,446	$ 5,722	$ 2,668
. Percent increase from previous year	83%	114%	N/A
Income (loss) from continuing operations before taxes	$ 2,133	$ 1,070	$ (415)
. Percent increase from previous year	99%	358%	N/A
Income (loss) from discontinued operations (b)	$ (296)	$ (562)	$ 365
Net income	$ 828	$ 68	$ 138
. Percent increase (decrease) from previous year	*	(51%)	N/A
Earnings (loss) per share from continuing operations	$ 0.35	$ 0.18	$ (0.07)
. Percent increase from previous year	94%	357%	N/A
Net earning per share	$ 0.24	$ 0.02	$ 0.04
. Percent increase (decrease) from previous year	*	(50%)	N/A

*Percent change exceeds 1,000%

(a) For periods prior to fiscal 1984, the company's current line of business was not material and revenue from that business was insignificant. Accordingly, financial information for prior periods has been omitted.

(b) Reflects income/losses associated with Sage Federal Systems, Inc. (SFSI) which was sold in March 1986 to former officers and shareholders for $180,000. SFSI had revenue of approximately $9.4 million, $10.4 million, and $6.1 million for fiscal 1986, 1985, and 1984, respectively.

©1987 by INPUT. Reproduction Prohibited.

- Product development expenditures were approximately $2.7 million (26% of revenue) in fiscal 1986, $1.2 million (21% of revenue) in fiscal 1985, and $884,000 (33% of revenue) in fiscal 1984.

- Revenue for the nine months ending January 31, 1987 reached $10.2 million, a 50% increase over $6.8 million for the same period in 1986. Net income also rose 50% from $697,000 to over $1 million.

- As of October 31, 1986, Sage Software had 118 employees, segmented as follows:

Sales, marketing, and support	60
Research and development	42
General and administrative	16
	118

KEY PRODUCTS AND SERVICES

- One hundred percent of Sage Software's revenue is derived from its application development systems software product licenses, maintenance fees, and royalties. A further breakdown of source of revenue follows:

	4/86	4/85
End-user revenue		
Licenses	64%	54%
Maintenance fees	4	8
Royalties		
Remote computing services	31	35
Software vendor licensing	1	3
	100%	100%

- Sage Software markets an integrated family of CASE tools, known as the APS Development Center or APS, that are designed to increase the productivity of analysts and programmers involved in the development of applications software systems. APS consists of five product groups comprising a total of 15 integrated products. The company's products run on IBM and compatible mainframe computers, operate with IBM's major operating systems (MVS and VM) and support IBM data base management and data communications systems, including DB2, IMS, VSAM, and CICS.

 - APS/PC Workstation focuses on the beginning of the development life cycle of an applications software system. Using products in this product group, the analyst can create prototype applications without programming. In addition, by allowing the analyst to simulate the appliations software systems in the early stages, misconceptions and errors can be corrected inexpensively before programming begins. There are three products within this product group.

©1987 by INPUT. Reproduction Prohibited.

- APS/PC Painters provide the analyst with the ability to create prototypes on a personal computer without using more costly moinfrome computer resources ond progromming personnel.

- APS/PC Dictionory allows the anolyst to store ond retrieve informotion ond focilitotes generotion of documentotion.

- APS/PC Link connects the APS/PC Dictionory ond Pointers to a moinfrome computer ond ollows the informotion stored in the APS/PC Dictionary to be moved to ond from the APS Dictionory on the moinfrome computer, enobling o development staff to extend prototypes into full production systems.

- APS Applicotion Generotors consist of mainframe-bosed products that occept input from the APS/PC Workstotion and/or 3270 terminols. These products serve analysts and progrommers in the implementotion ond mointenonce phoses of the development of applicotions systems. There ore two products within this product group:

 - APS Painters (moinfrome versions of APS/PC Pointers) ollow the onolyst to creote screens, reports, ond dota structures.

 - APS Generotors occess the APS Dictionory ond outomoticolly generote notive source code. The generotors identify coding errors before compiling, thereby reducing the errors trodition-olly found during system testing.

- APS DB/DC Products consist of moinfrome-bosed products thot focili-tote the translotion of high level commands into source code thot is suitoble for specific doto base monogement ond doto communication systems. There ore six products within this product group--APS/IMS, APS/CICS, APS/DB2, APS/VSAM, APS/IDMS, ond APS/DATACOM DB.

- APS Maintenonce Products copy existing production code from doto bose and screens ond populate the APS Dictionory. There ore two products within this product group:

 - Dota Base Importers focilitote the importing of chorocteristics and rules token from existing dota bose descriptions within IMS.

 - Screen Importers focilitote the importing of chorocteristics ond rules taken from existing screen definitions reloted to CICS.

- APS Dictionory is the centrol repository for the other four product groups within the APS fomily. These products provide support for the monagement of opplicotions system entities ond for job control longuoge ond document generotion. There ore two products within this group:

©1987 by INPUT. Reproduction Prohibited.

- Application Dictionary permits the management of data integration among all the APS products.

- Macro Facility is a COBOL-based language processor with built-in features for blue-printing standard, pretested, and reusable code modules.

- Sage Software's products are licensed to end users pursuant to a perpetual license or a rental license plan. As of October 31, 1986, approximately 96% of all license agreements with customers were perpetual licenses. To receive maintenance and enhancements for the individual products after the first year of a perpetual license, an end-user must pay an annual fee in advance that is generally 15% of the then-current perpetual license fee for the products. Services consist primarily of software updates and telephone support for technical product assistance.

- Sage Software also derives royalty revenues from timesharing and software vendor licensing.

 - Sage Software has granted an exclusive license to Results, Inc. to provide remote computing services for the company's products in North America. The license entitles the company to receive 35% of all funds received by Results in connection with the use of the company's products. The license also obligates Results to pay Sage Software annual minimum royalties.

 - APS products are also licensed to third-party software vendors for incorporation into their software products. Sage Software licenses its products to third-party vendors only if they agree to license the software products that contain the company's products on a "right to use," non-exclusive basis.

INDUSTRY MARKETS

- Approximately 68% of Sage Software's fiscal 1986 revenue was derived from end users in a range of industries (including 12% from the federal government); 31% was derived from Results, Inc., the company's licensed remote computing vendor; and 1% was derived from third-party software vendors.

- Sage Software customers include AT&T Technologies, Blue Cross/Blue Shield, The Boeing Company, Caterpillar, Continental Illinois NB, Deere & Company, Federal Reserve Bank of Richmond, Fireman's Fund, Federal Home Loan Mortgage Corporation, Great Western Savings, IBM, Lockheed Corporation, Nabisco Brands, Northrop Corporation, Philip Morris U.S.A., Ralston Purina Company, Rockwell International Corporation, Searle Pharmaceuticals, State of New York Department of Taxation, Texas Instruments, Union Pacific Railroad, Universal City Studios, Veterans Administration, and Westinghouse Electric Corporation.

©1987 by INPUT. Reproduction Prohibited.

GEOGRAPHIC MARKETS

- Virtually all of Sage Software's fiscal 1986 revenue was derived from the U.S.
- The company's products are marketed to the commercial market in North America by its own direct sales force. Products are marketed to the federal government primarily through Sage Federal Systems, Inc. Sage Software has field sales and support offices in Boston, Chicago, New York, San Diego, San Jose, Cleveland, and Washington, D.C.
- The company's products are marketed internationally by independent distributors.

©1987 by INPUT. Reproduction Prohibited.

THE SANTA CRUZ OPERATION, INC.

400 Encinal Street
P.O. Box 1900
Santa Cruz, CA 95061-1900
Phone: (408) 425-7222
Fax: (408) 427-5448

Chairman:	Jim Harris
President & CEO:	Lars Turndal
Status:	Public Corporation
Total Employees:	1,231 (3/93)
Total Revenue:	$163,720,000
Fiscal Year End:	9/30/92

Key Points

- The Santa Cruz Operation, Inc. (SCO) has the largest installed base of UNIX systems software for Intel-based computer systems, with an estimated 70% share in the global Intel-based open software market.
- With its recent acquisition of IXI Limited, SCO gains leadership in graphical desktop windowing software for UNIX.
- SCO management believes the company is well-positioned to capitalize on three key industry trends--the improving price/performance of Intel-based PCs, the movement of mission-critical applications from mainframes and minicomputers onto networks of these PCs in advanced client/server architectures, and the demand by customers for open system solutions.
- SCO's sales and distribution channels include over 4,800 resellers, 140 VARs and systems integrators, 100 distributors, and 40 OEMs.
- In January 1993, Lars Turndal, SCO's top European manager, was appointed president and chief executive officer of SCO and Jim Harris was elected as chairman of the board.
- In April 1993, SCO issued a prospectus in anticipation of an initial public offering of six million shares of its stock.

Copyright 1993 by INPUT. Reproduction Prohibited.

Company Description

SCO is a leading provider of open systems software. Products include advanced 32-bit operating systems, networking and distributed computing software, user interface products, and development and language tools.

SCO's products support the full range of Intel processors, including the recently announced Pentium processor, and are compatible with virtually all Intel-based computers offered by major hardware vendors.

Strategy

SCO's strategy is to maintain a leadership position in the advanced operating systems software market. Key elements of this strategy include:

- Focusing on Intel-based network computers because of their dominant position in the desktop computer market and their potential in the client/server market
- Providing true open systems software
- Supporting a range of applications
- Incorporating third-party technology
- Providing worldwide distribution and comprehensive support
- Focusing on business opportunities in enterprise computing, branch automation, small-to-medium businesses, and embedded systems for key targeted industries--retail, finance and banking, government, distribution, telecommunications, transportation, and manufacturing
- Executing a global strategy with support for customers throughout the world.

Company History

SCO was founded in 1979 as a technical management consulting service specializing in applications developed under UNIX.

In 1981, SCO began working with Microsoft Corporation to develop and market XENIX, the first commercial version of the UNIX operating system.

In 1983, SCO delivered the first version of Microsoft's XENIX operating system, as well as XENIX-based applications for 8088- and 8086-based microcomputers. SCO followed by introducing XENIX for the 80286 environment in 1985 and SCO XENIX 386 for 80386-based microcomputers in 1987.

Copyright 1993 by INPUT. Reproduction Prohibited.

In 1989, SCO shipped the first volume commercial product licensed by AT&T to use the UNIX trademark - SCO UNIX System V/386.

On February 15, 1989, Microsoft further strengthened its relationship with SCO by purchasing a minority share (less than 20% equity) of SCO for an estimated $19.9 million. As part of the agreement, both companies have said they will increase resources committed to joint technology exchange, product development, and marketing efforts.

In 1990, SCO shipped the first integrated, graphical, 32-bit UNIX system for Intel-based computers--SCO Open Desktop.

In 1991, SCO shipped the first packages software to support the new Intel-based multiprocessor computers--SCO MPX.

During 1991, SCO underwent a corporate restructuring, which included a reduction of staff completed in November 1991 and the discontinuance of several business applications products.

In April 1993, SCO issued a prospectus in anticipation of an initial public offering of six million shares of its common stock. Estimated net proceeds to the company will be $42.8 million.

Financials

Total fiscal 1992 revenue was $163.7 million, a 21% increase over fiscal 1991 revenue of $135.6 million. Net income was $8.5 million, compared to net losses of $11.1 million for fiscal 1991.

- While SCO experienced continued revenue growth through fiscal 1991, it did not achieve sustained profitability until fiscal 1992, both because of investments in the company's multichannel distribution network, as well as investments in product development and marketing, particularly for operating systems for RISC microprocessors and in business applications.

- The company achieved a net profit during 1992 as a result of increased customer acceptance of SCO's products and growth in net revenue, combined with increased emphasis on cost controls, higher productivity, and the focus on open systems software for Intel-based systems.

- A five-year financial summary follows:

Copyright 1993 by INPUT. Reproduction Prohibited.

THE SANTA CRUZ OPERATION, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	9/92	9/91	9/90	9/89	9/88
Revenue	$163.7	$135.6	$106.8	$75.5	$60.4
· Percent change from previous year	21%	27%	41%	25%	N/A
Income (loss) before taxes	$9.2	$(11.1) (a)	$(3.5)	$(10.4)	$(2.2)
· Percent change from previous year	183%	(217%)	66%	(373%)	N/A
Net income (loss)	$8.5	$(11.1)	$(3.5)	$(10.2)	$(2.5)
· Percent change from previous year	177%	(217%)	66%	(308%)	N/A
Earnings (loss) per share (b)	$0.32	$(0.46)	$(0.15)	$(0.50)	$(0.13)
· Percent change from previous year	170%	(207%)	70%	(285%)	N/A

(a) Includes restructuring charges of $2.6 million.

(b) Adjusted to reflect conversion of all preferred stock into common stock.

- License revenues increased 21% in fiscal 1992 and 25% in fiscal 1991 due primarily to increased revenue for SCO's operating systems and related products in the federal and European sales channels, as SCO continued its shift in marketing focus towards systems software and away from business applications.

- Services revenue increased 19% during fiscal 1992 and 478% in fiscal 1991 due primarily to increases in support services related to SCO's larger installed base.

Research and development expenses were $21.6 million (13% of revenue) in fiscal 1992, $22.2 million (16% of revenue) in fiscal 1991, and $16.2 million (15% of revenue) in fiscal 1990.

Revenue for the six months ending March 31, 1993 reached $88.9 million, a 17% increase over $75.7 million for the same period in 1992. Net income was $7.7 million, compared to $2.6 million for the same period a year ago.

SCO estimates that its revenue for fiscal 1993 will increase 20% to approximately $195 million.

Copyright 1993 by INPUT. Reproduction Prohibited.

Acquisitions

In February 1993, SCO acquired IXI Limited, a software company headquartered in Cambridge (England) for 1.6 million shares and options of SCO common stock.

- IXI, with 1992 revenues of $6 million and 50 employees, is a leading provider of graphical desktop windowing software products for Intel-based, RISC, and VMS hardware platforms.
- IXI leads the rapid growth of the desktop market for UNIX; in 1992, IXI's installed base doubled to more than 250,000 users. This installed customer base includes major telecommunications companies, automotive manufacturers, oil companies, national and international banks, and various government agencies.

In May 1990, SCO acquired HCR Corporation of Toronto, the leading UNIX systems software company in Canada.

Alliances

SCO's worldwide sales and distribution channel includes over 4,800 resellers, 140 value-added resellers and systems integrators, 100 distributors, and 40 OEMs.

SCO has OEM agreements with over 40 computer manufacturers, including Acer, Altos, Compaq, Dell, DEC, Fujitsu, Grid, Hewlett-Packard, IBM (Europe), Mitsubishi, NCR, NEC, Olivetti, Siemens Nixdorf, Tandy, Wang, Xerox, and Zenith/Bull.

Employees

As of March 31, 1993, SCO had 1,231 employees, segmented as follows:

Sales and marketing	483
Customer support	163
Product development	321
Finance, manufacturing and distribution services, and administration	264
	1,231

Competitors

OEMs that offer their own version of the UNIX operating system with both their Intel and RISC-based systems include IBM, Sun, Hewlett-Packard, NCR, Livett, and DEC. Many of these hardware competitors

Copyright 1993 by INPUT. Reproduction Prohibited.

also offer SCO's UNIX products, either through direct OEM agreements or indirectly through various distribution channels used by SCO.

As SCO's products penetrate the multi-processor and server markets, SCO will increasingly compete with IBM's AS/400 and DEC's VAX Alpha operating hardware and related UNIX operating systems.

Other competitors include UNIX-based software from Univel, SunSoft, and NeXT; and Windows NT from Microsoft.

Key Products and Services

Approximately 89% of SCO's fiscal 1992 revenue was derived from software licenses and 11% from associated support services. A three-year summary of source of revenue follows:

THE SANTA CRUZ OPERATION, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	9/92		9/91		9/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Licenses	$146.2	89%	$120.9	89%	$96.8	91%
Services	17.5	11%	14.7	11%	10.0	9%
TOTAL	**$163.7**	**100%**	**$135.6**	**100%**	**$106.8**	**100%**

SCO provides a family of products for desktop computers and servers within an open system architecture.

- The company's products include operating systems, networking and distributed computing software, user interfaces, and development and language tools.
- SCO's products support the full range of Intel processors.
- SCO has shipped over 750,000 licenses to multi-user environments worldwide.

Copyright 1993 by INPUT. Reproduction Prohibited.

SCO Server Products:

SCO Server Products are powerful 32-bit operating systems that run on industry-standard Intel-based computers that function as servers in networks. They provide full multi-user, multitasking capabilities. Key products in this category include the following:

- SCO Open Desktop Service System is an integrated, full-featured operating system designed to function as an applications server, file server, data base server, and communications server. The system is based on a multi-user version of SCO UNIX and includes local-area networking, distributed graphical user interface support, and MS-DOS services. It has a U.S. list price of $2,500.

- SCO UNIX Operating System is a complete base operating system that supports full 32-bit multitasking and multi-user capabilities. It has a U.S. list price of $595 for a two-user version and $1,295 for an unlimited-user version.

- SCO UNIX System (Network Edition) combines the SCO UNIX Operating System with popular networking software packages. It is intended to be used as a server on the network when all of the features of the SCO Open Desktop Server System are not need. It has a U.S. list price of $2,195.

- SCO XENIX System is a fully functional, 32-bit operating system that provides full multi-user and multitasking. It is widely used in small, multi-user configurations in professional offices, point-of-sale, and vertical applications. The system has a U.S. list price of $595 for a two-user version and $895 for an unlimited-user version.

SCO Desktop Products:

SCO Desktop Products are 32-bit operating systems that operate on industry-standard Intel platforms and permit users to run local applications and access services available on local- or wide-area networks.

SCO Open Desktop Personal System, the primary product in this category, is a fully integrated single-user, multitasking operating system designed to be used in a networked environment. It is based on a single-user version of SCO UNIX and includes a graphical user interface, networking capability, and MS-DOS (and support for the Windows interface). The U.S. list price is $1,300.

Copyright 1993 by INPUT. Reproduction Prohibited.

SCO Extension Products:

SCO Extension Products supplement the capabilities of SCO's major operating systems. Products include:

- SCO MPX, a multiprocessing extension for SCO UNIX System and SCO Open Desktop
- SCO TCP/IP, a network protocol providing networking support for computers running SCO operating systems
- SCO NFS, a network file system for SCO UNIX Systems
- Microsoft LAN Manager for UNIX Systems, a SCO packaged-product version of Microsoft LAN Manager

IXI Limited's Products:

IXI X.desktop, based on the OSF/Motif windowing system, is a hardware independent software application that creates an easy-to-use visual working environment.

IXI Deskworks is a suite of tightly integrated productivity applications for users of workstations running the OSF/Motif graphical user interface.

Support Services:

SCO's services support its wide range of customers, from small and medium-sized businesses to large enterprises, both at the end user and reseller levels.

- Technical support includes various support offerings ranging from bulletin board access to technical tips and work arounds, telephone support, and major account support agreements.
- Educational services include off-the-shelf courseware and instruction guides provided to end users and to approximately 140 Authorized Education Centers, which in turn provide training and education materials to both end users and resellers.
- Consulting services consist of assistance, including on-site technical personnel for extended assignment, integration, implementation, and deployment of applications on SCO platforms, primarily for branch automation and enterprise computing applications.
- Developer services include technical advisory and support services and access to early product releases for application developers.

Copyright 1993 by INPUT. Reproduction Prohibited.

- Engineering services consist of engineering personnel who assist OEMs to port and support the SCO products on their hardware platform.

Support services are sold to end users on an annual contract or as needed basis. Options are available to tailor support to meet specific needs. Software updates are sold separately through a telesales department. Electronic access is available through either a remote or local bulletin board and through CompuServe.

Support for distributors, VARs, OEMs, and integrators includes engineering services, developer services, and technical support. In addition, SCO works with qualified third parties in establishing Authorized Education Centers and Advanced Product Centers where authorized resellers are provided sales, technical, and educational training on SCO's products.

OEMs that support SCO products include Compaq, Dell, Hewlett-Packard, IBM, NCR, NEC, Siemens-Nixdorf, and Unisys.

Industry Markets

SCO targets four major market segments--enterprise-wide computing for large organizations, usually Fortune 500 companies, that require distributed, open systems compatible with other systems; branch automation, where replicated systems operate on low-cost platforms across multiple locations; multi-user systems for small to medium-sized enterprises; and embedded systems.

Key targeted industries include retail, finance and banking, government, distribution, telecommunications, transportation, and manufacturing.

The SCO sales and distribution channels focus on three major customer groups as follows:

- Corporate Customers--In the U.S. and for selected customers across Europe, SCO has developed a major account team that builds and manages the relationships with customers in targeted industries and with SCO's channel partners that support such customers. In smaller markets, this role is filled by major distributors. SCO provides direct support to major corporate customers. Support is also provided by OEMs, systems integrators, and VARs.

- Government Customers--In the U.S., SCO has a dedicated account team that manages the relationships with government agencies. Government sales outside the U.S. are managed either by SCO

Copyright 1993 by INPUT. Reproduction Prohibited.

regional management or by OEMs, major distributors, or major resellers. SCO also works with federal systems integrators.

- Small and Medium-Sized Businesses--SCO works with VARs, resellers, and certified dealers that develop and/or sell business solutions to small and medium-sized businesses.

During fiscal 1992, SCO signed an agreement to provide software to the U.S. government (through a contractor) for the Reserve Component Automation System project. Revenue associated with this contract represented 11% of total revenue in both fiscal 1992 and the six months ending March 31, 1993.

Clients

Representative end users include the following:

- Banking and finance: Banco do Brasil, Charles Schwab, Citibank (Canada, Latin America, Spain), Dean Witter, Dresdner Bank A.G., NASD, National Westminster Bank, Thomson Financial, Toronto Stock Exchange
- Telecommunications: Bell Atlantic, France Telecom, GTE Telecom, Northern Telecom, Rolm, Siemens-PN
- Retail: Dixons, Famous Footware, Goodyear, Jiffy Lube, Kroeger, Northern Automotive Pep Boys, Radio Boys, Radio Shack, Sherwin-Williams, True Value Hardware
- Industrial: Abbott Labs, Ford Motor (Europe), Harris, Intel
- Energy/transportation: Amoco Oil, Aral, Atlantic Richfield
- Fast food/hospitality: Holiday Inn, Marriott, McDonald's, Pizza Hut, Taco Bell
- Pharmacy: CVS Pharmacies, Payless Drugs, Pharma Plus, Kmart, Rite Aid, Thrifty Stores
- U.S. government: Internal Revenue Service, NASA, U.S Army (RCAS), USDA, U.S. Passport Office
- Foreign government: EEC, Republic of China (Census Bureau)

Copyright 1993 by INPUT. Reproduction Prohibited.

Geographic Markets

Approximately 46% ($75 million) of SCO's fiscal 1992 revenue was derived from the U.S. and Canada, and 54% from international sources, including Europe, Japan, Australia, Mexico, and Singapore.

In addition to its headquarters in Santa Cruz, SCO has U.S. offices in Atlanta, Boston, Chicago, Dallas, Detroit, Los Angeles, and Reston (VA).

SCO also maintains sales and distribution offices in the U.K., France, Germany, Italy, Australia, Singapore, Japan, Canada, and Mexico.

Copyright 1993 by INPUT. Reproduction Prohibited.

THE SANTA CRUZ OPERATION, INC.
400 Encinal Street
P.O. Box 1900
Santa Cruz, CA 95060
(408) 425-7222

Larry Michels, President, CEO, and Co-Founder
Doug Michels, Executive Vice President and Co-Founder
Private Corporation
Total Employees: 1,300
Total Revenue, Fiscal Year End 9/30/90: $107,000,000

The Company

The Santa Cruz Operation, Inc. (SCO) provides a range of UNIX System V operating systems software products, training, and associated support services for standard hardware platforms. SCO also offers networking and communications software, software development tools, and business application products for UNIX and XENIX System V environments.

SCO was founded in 1979 as a technical management consulting service specializing in applications developed under UNIX.

- In 1981, SCO began working with Microsoft Corporation to develop and market XENIX, the first commercial version of the UNIX operating system.
- In 1983, SCO delivered the first version of Microsoft's XENIX operating system, as well as XENIX-based applications for 8088- and 8086-based microcomputers. SCO followed by introducing XENIX for the 80286 environment in 1985 and SCO XENIX 386 for 80386-based microcomputers in 1987.
- In 1989, SCO shipped the first volume commercial product licensed by AT&T to use the UNIX trademark - SCO UNIX System V/386.
- On February 15, 1989, Microsoft further strengthened its relationship with SCO by purchasing a minority share (less than 20% equity) of SCO for an estimated $19.9 million. As part of the agreement, both companies have said they will increase resources committed to joint technology exchange, product development, and marketing efforts.

Copyright 1991 by INPUT. Reproduction Prohibited.

- SCO continues to enhance its operating systems as well as add to its applications software product portfolio designed to run in an open system environment.

- To date, SCO has shipped over 435,000 UNIX systems for industry-standard computers. There are over 3,500 applications currently supported by SCO's operating systems.

SCO's current strategic directions include: taking advantage of industry-standard hardware in the workstation environment, developing applications for the X11 environment, utilizing distributed data base technology across heterogeneous networks, and establishing standards in user interface technology.

In May 1990, SCO acquired HCR Corporation of Toronto, the leading UNIX systems software company in Canada.

- The acquisition strengthens SCO's position in programming tools and increases SCO's ability to supply OEM and corporate contract-development services and consulting.

- HCR had approximately 50 employees at the time of the acquisition. It now operates as SCO Canada, Inc., a wholly owned subsidiary of SCO.

Total fiscal 1990 revenue reached $107 million, a 43% increase over fiscal 1989 revenue of $75 million. A five-year revenue summary follows:

THE SANTA CRUZ OPERATION, INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	9/90	9/89	9/88	9/87	9/86
Revenue	$107.0	$75.0	$60.0	$27.0	$11.0
• Percent increase from previous year	43%	25%	122%	145%	N/A

SCO estimates that its revenue for fiscal 1991 will be approximately $150 million.

SCO is currently organized as follows:

- The corporate headquarters is located in Santa Cruz (CA), and handles the research and development of SCO's products, as

Copyright 1991 by INPUT. Reproduction Prohibited.

well as the sales and marketing functions for the commercial market in the U.S., the Pacific Rim, Asia, and Latin America. The training services offered by SCO are also handled through this office.

- The Federal Systems Group, headquartered in Reston (VA), provides sales and services to the government, and to systems integrators serving the government market. The Federal Systems Group employs approximately 25 professionals and draws on the resources of the headquarters staff for technical support.

- The Santa Cruz Operation, Ltd., headquartered in Watford (U.K.), is the European headquarters for SCO and is responsible for marketing, training and support to Western and Eastern Europe, Africa, and the Middle East. This operation has approximately 300 employees.

- SCO Canada, Inc., headquartered in Toronto, was formed during 1990 with the acquisition of HCR Corporation. This subsidiary is responsible for product marketing and custom development and support services in Canada.

As of October 1990, SCO had approximately 1,250 employees. The company currenly has over 1,300 employees worldwide.

Key Products and Services

Approximately 60% SCO's fiscal 1990 revenue was derived from systems software (including operating systems, extensions, networking and communications software, languages, and application development tools), 25% from business application software, and the remaining 15% from associated support services.

SCO UNIX System V/386, introduced in 1989, is the first operating system for industry-standard microcomputers licensed by AT&T to bear the UNIX trademark, the first to fulfill the requirements of the X/Open Portability Guide, and the first to conform to the IEEE POSIX specification for portable operating systems.

SCO also provides SCO Open Desktop, SCO MPX, and XENIX System V operating environments, as well as networks and communications, applications development, languages, data base management, and application software products for microcomputers and workstations. SCO's current products are summarized in the exhibit.

Copyright 1991 by INPUT. Reproduction Prohibited.

EXHIBIT

THE SANTA CRUZ OPERATION, INC.
SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION
SYSTEMS SOFTWARE/OPERATING ENVIRONMENTS	
SCO Open Desktop®	Graphical operating system for 386 and 486 computers
SCO UNIX System V/386	Operating system for 386 environments
SCO XENIX System	Operating system for 286 and 386 environments
SCO XENIX Tutor	SCO XENIX training on MS-DOS systems
SCO MPX	Multiprocessing extension for SCO Open Desktop and SCO UNIX System V/386
SCO VP/ix	Multiuser, multitasking MS-DOS-under-UNIX
SCO Multiview	Multitasking windowing environment
JSB MultiView DeskTop*	Windows interface to MS-DOS and UNIX system applications
SCO Xsight	X Window system environment for SCO XENIX and UNIX systems
PC Xsight	High-performance X Window system environment for MS-DOS systems
SCO CGI	Computer graphics interface
NETWORKING AND COMMUNICATIONS	
SCO XENIX-NET	Local-area network to connect 286, 386, and 486 computers running SCO XENIX and MS-DOS
SCO ASYNC-NET for MS-DOS	Asychronous communications
SCO TCP-IP	Network support for SCO XENIX and SCO UNIX systems
SCO NFS	Network file system for SCO UNIX systems
SCO OSI	Government-standard local-area network
SCO X.400	X.400-compliant mail system
SCO uniPATH SNA-3270	Multiuser micro-to-mainframe connection for SCO XENIX and SCO UNIX system users
Microsoft LAN Manager for UNIX System*	Local-area network for MS-DOS, OS/2, XENIX, and UNIX systems

* *Third-party products*

Copyright 1991 by INPUT. Reproduction Prohibited.

EXHIBIT

THE SANTA CRUZ OPERATION, INC.
SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION
LANGUAGES AND DEVELOPMENT TOOLS	
SCO Open Desktop Development System	Development platform for network, distributed, graphical applications
SCO System V Development Systems	C-language development environments for SCO XENIX, SCO UNIX System V/386, and other UNIX systems, as well as MS-DOS and OS/2
SCO C++	Object-oriented programming language
Micro Focus COBOL/2* - FORMS-2 - ANIMATOR	COBOL compiler Development tool Development tool
Microsoft Languages* - BASIC Interpreter - Pascal Compiler - FORTRAN Compiler - BASIC Compiler	Languages/compilers
LPI Languages* - LPI-BASIC - LPI-FORTRAN - LPI-PASCAL - LPI-PL/1 - LPI-RPG II - LPI-COBOL - LPI-CODEWATCH	High-performance languages for 386 and 486 systems Interactive source-level debugger
DATA BASE PRODUCTS	
SCO Integra	SQL-based relational data base management system
SCO ACCELL	Fourth-generation language and application generator
SCO FoxBASE+	XENIX and UNIX system-based multiuser relational data base management system
BUSINESS APPLICATIONS	
SCO Portfolio	Workgroup productivity manager
SCO Lyrix	Word processing program
SCO Professional	Spreadsheet, graphics, and data base package
SCO Imagebuilder	Presentation graphics for XENIX systems
Microsoft Word 5.1*	Word processor for XENIX, UNIX, and Open Desktop systems

* *Third-party products*

Copyright 1991 by INPUT. Reproduction Prohibited.

Many of the application products marketed by SCO were developed by other companies and ported, under agreement, to SCO's operating systems and subsequently supplied by SCO to its customers.

SCO support services include the following:

- The SCO Online Support System is a dial-up on-line information system providing technical product information, product updates, support level supplements, training schedules, press releases, and other information.
- SCO SoftCare provides toll-free telephone access to SCO software support engineers. Each SCO software package includes 30 days of complimentary SCO SoftCare support.
- SCO SoftTech is a priority support service for corporate users, OEMs, VARs, developers, and distributors.
- Technical training for SCO customers is available from SCO or SCO Authorized Education Centers.
- The SCO Advanced Certified Engineer (ACE) Program is a series of technical courses to certify technical professionals in providing technical services to SCO installations.
- SCO also offers consulting and custom engineering services to SCO software clients. These services are based at the SCO Canada subsidiary.
- The SCO Directory is a guide to software, hardware, and services for SCO systems.

Industry Markets

SCO's products are marketed across industry segments to both large corporations and small companies.

SCO's products are sold through a network of distributors, VARs, retailers, and OEMs.

SCO also sells its products to systems integrators.

Copyright 1991 by INPUT. Reproduction Prohibited.

Geographic Markets

SCO's fiscal 1990 revenue was derived approximately as follows:

U.S. and Canada	53%
Europe, Africa, and the Middle East	37%
Pacific Rim/Asia, and Latin America	10%
	100%

SCO serves the U.S. and Canada through a distribution network that includes over 2,500 resellers, 12 national and regional distributors, and major retail chains such as ComputerLand and MicroAge.

- In addition to its headquarters in Santa Cruz, SCO has established regional sales offices in Atlanta, Boston, Chicago, Dallas, Detroit, and Los Angeles, as well as the new Canadian regional headquarters in Toronto and a Federal Systems Group in Reston (VA).

SCO Ltd., headquartered near London, works with 30 selected distributors to provide all of SCO's marketing, training, and support to Western and Eastern Europe, Africa, and the Middle East. Since its founding in 1986, SCO Ltd. has doubled its revenues each year.

SCO serves 37 countries in the Pacific Rim, Asia, and Latin America through a network of 37 OEMs, 40 local distributors, and thousands of resellers. These efforts are directed through SCO's Santa Cruz office. There is an SCO business office in Australia and the company plans to open similar offices in Brazil, Japan, Korea, and Mexico.

Computer Hardware

For research and development purposes SCO maintains a variety of standard microcomputer processors and peripherals.

Copyright 1991 by INPUT. Reproduction Prohibited.

THE SANTA CRUZ OPERATION, INC.
400 Encinal Street
Santa Cruz, CA 95060
(408) 425-7222

Larry Michels, Co-Founder and President
Doug Michels, Co-Founder and Vice President
Private Corporation
Total Employees: 850
Total Revenue, Fiscal Year End 10/31/88: $60,000,000*

*INPUT estimate

The Company

The Santa Cruz Operation, Inc. (SCO), founded in 1979, is the leading supplier of the XENIX operating system. SCO™ XENIX® System V, is an enhanced version of AT&T's UNIX operating system designed specifically for standard microcomputers. SCO is also a major supplier of application and systems software based on the XENIX operating system. SCO's software supports the following functions: word processing, integrated spreadsheets, presentation graphics, statistical analysis, database management, project management packages, and office automation, as well as packages to link DOS and XENIX applications and micro-to-mainframe communications packages.

- SCO was founded as a technical management consulting service specializing in applications developed under UNIX.
- In 1981, SCO began working with Microsoft Corporation to develop and market XENIX, the first commercial version of the UNIX operating system.
- In 1983, SCO introduced the first XENIX operating system and XENIX-based applications for 8088- and 8086-based microcomputers. SCO followed by introducing XENIX operating systems for 80386 based microcomputers in 1987, and in 1988 released SCO XENIX System V Release 2.3 for 80386 based microcomputers that ran applications written both for UNIX System V and XENIX System V operating systems. SCO has continues to enhance its operating systems as well as add to its applications software product portfolio designed to run on SCO's proprietary operating systems.
- SCO claims that they currently supply about 85% of the world's XENIX operating systems, and that there are over 2,500 applications currently supported by SCO's operating systems.

Copyright 1989 by INPUT. Reproduction Prohibited.

SCO's current strategic directions include: taking advantage of industry-standard hardware in the workstation environment, developing applications for the X11 environment, utilizing distributed database technology across heterogeneous networks, and establishing standards in user interface technology.

On February 15, 1989, Microsoft Corporation further strengthened its relationship with SCO by purchasing a minority share (less than 20% equity) of SCO. As part of the agreement, both companies have said they will increase resources committed to joint technology exchange, product development, and marketing efforts.

- Industry sources indicated that Microsoft's investment was approximately $30 million.

Total fiscal 1988 revenue reached $60 million, a 122% increase over fiscal 1987 revenue of $27 million. A three-year revenue summary follows:

THE SANTA CRUZ OPERATION, INC.
THREE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR		
ITEM	10/88	10/87	10/86
Revenue	$60.0	$27.0	$11.0
• Percent increase from previous year	122%	145%	N/A

SCO estimates that its revenue for fiscal 1989 will exceed $100 million.

SCO is currently organized as follows:

- The corporate headquarters is located in Santa Cruz (CA), and handles the research and development of SCO's products, as well as the sales and marketing functions to the commercial market in the U.S., Canada, and Asia Pacific. The training services offered by SCO are also handled through this office.

- The Federal Systems Group, headquartered in Herndon (VA), provides sales and services to the government, and to systems integrators serving the government market. The Federal Systems Group employs approximately 25 professionals and

Copyright 1989 by INPUT. Reproduction Prohibited.

draws on the resources of the headquarters staff for technical support.

- The Santa Cruz Operation, Ltd., headquartered in Watford (U.K.), is the European headquarters for SCO and is responsible for SCO's European operations. There are approximately 200 European employees.
- SCO also has subsidiaries located in France and Germany and plans to open another subsidiary in Italy.

As of October 1988 SCO had approximately 800 employees.

Key Products and Services

SCO provides the XENIX operating system, as well as application software, training, and systems customization for XENIX systems.

The products distributed by SCO are listed in the exhibit.

Some of the technical features of SCO XENIX System V include the following:

- XENIX will run on over 90% of the microcomputers that will run microcomputer UNIX and has a larger applications base than microcomputer UNIX.
- XENIX provides a multitasking, multiuser environment.
- Applications written for earlier versions of SCO XENIX system V are compatible with any other version of SCO XENIX system V, and applications written for AT&T UNIX System V/386 Release 3.1 will run on SCO XENIX 386 System V without recompiling.
- SCO offers products that will enable a XENIX system to communicate with DOS-based processors, as well as allowing concurrent operation of MS-DOS applications with no special procedures and no concern for file system boundries.
- When two or more copies of a program are executing the shared text facility keeps only one copy of the executable code in memory while maintaining separate data for each copy of the program that is being executed, thus saving memory space.

Copyright 1989 by INPUT. Reproduction Prohibited.

EXHIBIT

THE SANTA CRUZ OPERATION, INC.
SOFTWARE PRODUCTS AND PRICING

PRODUCT	PRICE BASED ON PROCESSOR				
	IBM PS/2 MODELS 70 & 80	IBM PS/2 MODELS 50 & 60	386-BASED COMPUTERS	286-BASED COMPUTERS	8088/86 COMPUTERS
OPERATING ENVIRONMENTS					
SCO XENIX System V					
-SCO XENIX Operating System	$795	$695	$695	$595	$595
-SCO XENIX Development System	$795	$595	$795	$595	$595
-SCO XENIX Text Processing System	$195	$195	$195	$195	$195
Complete SCO XENIX System	$1,695	$1,395	$1,595	$1,295	$1,295
International SCO XENIX System V					
-International SCO XENIX Operating System	$1,295	$1,150	$1,150	$995	---
-International SCO XENIX Development System	$1,295	$995	$1,295	$995	---
SCO MultiView (Windowing Environment)	$495	$395	$495	$395	---
SCO VP/ix (integrated DOS Environment)					
-Two Users	$495	---	$495	---	---
-Unlimited Users	$995	---	$995	---	---
SCO CGI Graphics Runtime System	$295	$295	$295	$295	---
SCO Streams Runtime	$95	---	$95	---	---
NETWORKING AND COMMUNICATIONS					
SCO XENIX-NET					
-Single Server License	$695	$595	$695	$595	---
-3-Server License	$1,595	$1,295	$1,595	$1,295	---
SCO ASYNC-NET for MS-DOS	$195	$195	$195	$195	$195
SCO TCP/IP Runtime System	$595	---	$595	---	---
SCO uniPATH SNA-3270					
-Single User, 1-5 Sessions	$695	$595	$695	$595	$595
-Multiuser, 1-8 Sessions	$1,095	$995	$1,095	$995	$995
-Multiuser, 1-32 Sessions	$2,095	$1,995	$2,095	$1,995	---
-Programatic Interface	$595	$595	$595	$595	$595
-Communications Board	$395	$395	$395	$395	$395
BUSINESS SOFTWARE					
SCO Office Portfolio Suite	$1,995	---	$1,995	---	---
SCO Manager	$695	---	$695	---	---
SCO Lyrix	$695	$595	$695	$595	$595
-Medical Dictionary	$195	$195	$195	$195	$195
-Legal Dictionary	$195	$195	$195	$195	$195
SCO Professional	$895	$795	$895	$795	---
Microsoft Word	$595	$595	$595	$595	---
Multiplan	$495	$495	$495	$495	$495
SCO MasterPlan	$795	$795	$795	$795	---
SCO ImageBuilder	$795	$595	$795	$595	---
SCO Statistician	$995	$795	$995	$795	---

Copyright 1989 by INPUT. Reproduction Prohibited.

EXHIBIT

THE SANTA CRUZ OPERATION, INC.
SOFTWARE PRODUCTS AND PRICING

PRODUCT	PRICE BASED ON PROCESSOR				
	IBM PS/2 MODELS 70 & 80	IBM PS/2 MODELS 50 &60	386-BASED COMPUTERS	286-BASED COMPUTERS	8088/86 COMPUTERS
DATABASE PRODUCTS					
SCO Integra	$1,295	$995	$1,295	$995	---
SCO ACCEL	$1,295	---	$1,295	---	---
SCO FoxBASE+	$995	$795	$995	$795	---
SCO FoxBASE+ Runtime System	$295	$295	$295	$295	---
SCO FoxBASE	$795	$795	$795	$795	$795
SCO FoxBASE Runtime System	$295	$295	$295	$295	$295
Informix Relational Database System	---	---	$995	$995	$995
LANGUAGES AND DEVELOPMENT TOOLS					
Micro Focus COBOL					
-COBOL/2	$2,995	---	$2,995	---	---
• FORMS-2	$495	---	$495	---	---
• Run-Time System	$395	---	$395	---	---
-VS COBOL	$1,495	$1,495	$1,495	$1,495	---
• Development Tools	$1,295	$1,295	$1,295	$1,295	---
• Run-Time System	$395	$395	$395	$395	---
-Compact LEVEL II COBOL	---	---	---	---	$995
• Development Tools	---	---	---	---	$995
• Run-Time System	---	---	---	---	$195
C-ISAM	---	---	$325	$325	$325
Microsoft Languages					
-BASIC Interpreter	---	---	$395	$395	---
-Pascal Compiler	---	---	$695	$695	---
-FORTRAN Compiler	---	---	$695	$695	---
-BASIC Compiler	---	---	$695	$695	---
LPI Languages					
-LPI-BASIC	$695	---	$695	---	---
-LPI-FORTRAN	$995	---	$995	---	---
-LPI-PASCAL	$995	---	$995	---	---
-LPI-PL/I	$1,995	---	$1,995	---	---
-LPI-RPG II	$1,995	---	$1,995	---	---
-LPI-COBOL	$1,495	---	$1,495	---	---
-LPI-DEBUG	$795	---	$795	---	---

- Demand paging is the capability to break programs and data into 4096-byte pages for handling by SCO XENIX System V. Because of the way these pages are handled, not all of the

Copyright 1989 by INPUT. Reproduction Prohibited.

program has to be in memory for the program to execute. Pages are brought in from disk to memory as they are needed thus reducing system overhead.

SCO has recently introduced the Open Desktop™ based on its SCO UNIX System V/386 operating system, and will begin commercial shipments in September 1989. Open Desktop is an integrated office information system based on the following system building blocks:

- SCO UNIX System V/386 is the latest generation of SCO's operating systems, and currently runs over 2,500 XENIX and UNIX system-based applications in a multiuser, multitasking environment.

- Using Merge 386™, Open Desktop transparently integrates DOS and UNIX systems. This means users can run applications based on either operating system or develop applications that use the system facilities of both operating systems.

- The Open Desktop graphical user interface is based on the Open Software Foundation™ standard, OSF/Motif™. It includes the OSF/Motif toolkit, presentation description language, window manager, and style guide.

- SCO Xsight®, developed by SCO and Locus Computing Corporation, provides the windowing system for Open Desktop. SCO Xsight is based on the X Window System Version 11 developed at MIT (X11), and is compatible with X11 workstations from any vendor, or DOS microcomputers running PC Xsight from Locus Computing Corporation.

- For information management Open Desktop uses INGRES/386, from Relational Technology Inc., and SCO ISAM. INGRES/386 is an SQL relational database management system providing transparent access to data stored in either a network of PC's or in the corporate data center. SCO ISAM provides a library of C-language functions for creating and manipulating indexed file systems. Open desktop also includes interface specifications and libraries to other major networked relational database systems such as ORACLE.

- Using Ethernet connections to remote machines, Open Desktop offers seamless data and resource sharing using SCO TCP/IP and SCO NFS™. LAN Manager compatibility enables Open Desktop applications to communicate with OS/2, DOS,

Copyright 1989 by INPUT. Reproduction Prohibited.

and UNIX System servers that support LAN Manager protocols.

- Open Desktop will retail for $995.

Many of the application products marketed by SCO were developed by other companies and ported, under agreement, to SCO's operating system and subsequently supplied by SCO to their customers.

SCO also offers training for XENIX and XENIX-based applications. The training can be taken at SCO's headquarters, or on-site training can be arranged. Custom training programs can also be designed. Pricing for training classes ranges between $275 and $1,375, based mainly on the length of the course.

Industry Markets

SCO's products are marketed across industry segments to both large and small companies.

SCO's products are sold through a network of distributors, VARs, retailers, and OEMs.

SCO also sells its products to systems integrators.

Geographic Markets

SCO claims to generate 70% of its revenue from the U.S. and Canada, and the remaining 30% from Europe and the Asia/Pacific region.

Computer Hardware

For research and development purposes SCO maintains a variety of standard microcomputer processessors and peripherals.

Copyright 1989 by INPUT. Reproduction Prohibited.

SANTIAGO DATA SYSTEMS, INC.
1071 North Batavia
Orange, CA 92667
(714) 633-7807

Thomas Banks, President and CEO
Private Company
Total Employees: 17
Total Revenue, Fiscal Year End 6/30/89: $1,500,000*

*INPUT estimate

The Company

Santiago Data Systems, Inc., founded in 1980, specializes in industry-specific application software products. The company's primary focus is on medical and dental office automation, with a specific emphasis on electronic insurance claims processing. Santiago Data Systems also has a service business that automates tradeshow registration, electronic lead gathering, and event-wide electronic mail.

INPUT estimates Santiago Data Systems' fiscal 1989 revenue will approximate $1.5 million. The company grew by 50% during the last year and it is anticipated that fiscal 1990 revenue will increase 100% over fiscal 1989 levels.

Key Products and Services

Santiago Data Systems' revenue is derived approximately as follows:

Medical and dental application software	20%
Electronic claims software	30%
Software services and support	30%
Tradeshow services	20%
	100%

Santiago Data Systems offers the following medical and dental application software products for microcomputers running under MS-DOS, PC-DOS, and Novell:

- Santiago's Manager is a medical office automation system for accounts receivable, practice analysis, billing, insurance processing, and practice promotion applications.
 - A single-user version is available for a suggested retail price of $4,495. A multiuser Novell Network version has a suggested retail price of $6,990.

Copyright 1989 by INPUT. Reproduction Prohibited.

- Dental Manager is a dental office automation system that supports accounts receivable, practice analysis, billing, insurance processing, and practice promotion applications.
 - A single-user version is available for a suggested retail price of $4,495. A multiuser Novell Network version has a suggested retail price of $6,990.
- Santiago's Manager and Dental Manager have an installed based approaching 1,000 nationally.
- OneClaim is a software package that automates both medical and dental insurance claims processing.
 - When combined with an IBM or compatible microcomputer, it provides health care professionals (physicians, dentists, chiropractors, etc.) with a telecommunications link to national insurance companies (Blue Cross, Blue Shield, Aetna, Medicare, Medicaid, etc.).
 - OneClaim maintains a data base of patient demographics and transaction information. Periodically, the doctor's office connects to the EMC*EXPRESS insurance claims clearinghouse via General Electric's worldwide network. Upon making this connection, OneClaim transmits claims and received results and status reports.
 - OneClaim retails for $495.
- OnNotice supports delinquent accounts processing.
 - The product is available as a standalone system for $59.95.
 - OnNotice also electronically connects Santiago's Manager and Dental Manager users to Transworld Systems' collection agency for delinquent accounts processing. Transworld handles collections of delinquent accounts for a $50.00 enrollment fee, plus a fixed fee of $7.95 per account. However, if the user submits 12 delinquent accounts to collections within 120 days from the date of purchase the $50.00 enrollment fee is waived.

Santiago Data Systems also markets xpodx (eXPOsition Data eXchange), a software-based tradeshow information management service.

Copyright 1989 by INPUT. Reproduction Prohibited.

- The xpodx service includes registration, badging, automated lead gathering, electronic mail, post-show reporting, and show/exhibitor/attendee analyses.

- To date, Santiago Data Systems has offered xpodx only as a service. The company is considering offering xpodx as a fully automated system to show managers, convention centers, and individuals interested in the tradeshow industry.

Industry Markets

Approximately 80% of Santiago Data System's revenue is derived from medical and dental practices. The remaining 20% of revenue is derived from tradeshows and conventions.

Geographic Markets

INPUT estimates that virtually all of Santiago's revenue is derived from the U.S.

Santiago's Manager, Dental Manager, OneClaim, and OnNotice software products are targeted to the U.S. market and are distributed nationally by Ingram Software, Kenfil Distribution, Micro D, Transworld Systems, and Safeguard Business Systems.

Santiago Data System's xpodx tradeshow product is designed to service both the domestic and international tradeshow market and is distributed solely by Santiago Data Systems.

Copyright 1989 by INPUT. Reproduction Prohibited.

COMPANY BRIEF

Primary Industry-Specific Market: Medical

Santiago Data Systems, Inc.
1071 North Batavia
Orange, CA 92667
(714) 633-7807

CEO: Thomas Banks, President
Private Company
Founded: 1980

Employees: 21
Revenue (FYE 12/31/85): $3.5 million

The Company: Develops and markets office automation and recordkeeping microcomputer software for medical and dental offices

Sources of Revenue:
- Application Software (100%)

Key Products:
- Application Software (Utilizes microcomputers running under PC-DOS, MS-DOS, CP/M, CP/M 86, Concurrent PC-DOS, or Concurrent CP/M)
 - Medical Manager, a business management package for medical practices, maintains records on patients. It also assists in billing and reminding patients of their appointments.
 - Dental Manager performs essentially the same functions as the Medical Manager but is specialized for dental offices.

Target Industries:
- Medical (100%)

Geographic Markets:
- U.S. (100%)
- Santiago Data Systems distributes its products through its only office in Orange (CA) and through software dealers nationwide

©1986 by INPUT. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

Sapient Corporation

Co-CEO: J. Stuart Moore
Co-CEO: Jerry A. Greenberg
One Memorial Drive
Cambridge, MA 02142
Phone: (617) 621-0200
Fax: (617) 621-1300
Email: info@sapient.com
Internet: Http://www.sapient.com

Status:	Private
Employees:	300
Revenue (1995):	$20,000,000*

* INPUT Estimate

Key Points

- Sapient, founded in 1991, is owned by co-founders J. Stuart Moore and Jerry Greenberg.
- Sapient was founded to pioneer a fundamentally different process for designing and implementing new information systems, to make speed and quality converge in delivery.

Company Description

Sapient provides consulting services to assist clients with systems development and critical information systems development for client/server platforms.

The company uses its proprietary process QUADD (Quality Design & Delivery) to deliver solutions on a fixed price/fixed timeline basis.

Company Strategy

Sapient is focused on the idea of providing systems in the most cost-effective manner possible. The QUADD system was developed to document proven methods for system development.

© INPUT 1996 Reproduction prohibited.

Operations and Structure

Sapient's key executives are listed below:

Sapient Key Executives

Name	Title
Jerry A. Greenberg	Co-CEO
J. Stuart Moore	Co-CEO
Sheeroy D. Desai	EVP
Susan D. Johnson	CFO

U.S. offices are in Cambridge (MA), Jersey City (NJ), and San Francisco (CA).

Financials

Sapient is a privately owned firm. INPUT estimates the company's 1995 revenue to be approximately $20.0 million.

Employees

The company currently has 300 employees.

Key Products and Services

QUADD leverages people, process, and the capabilities of advanced client/server computing technologies to produce better solutions, faster.

The two basic areas of service from Sapient include consulting and client/server applications.

Consulting

Using the proprietary systems development process, QUADD, Sapient works with client IS departments and users to develop critical information systems.

Sapient personnel will provide highly skilled, specialized staff to meet the needs of client companies for systems development.

Client/Server Applications

Sapient staff works with the client to define issues and requirements and then develops and installs new client/server systems. The company provides full service turnkey-ready systems development.

Leverageable client/server applications developed include: wireless dispatch and field service, mortgage allocation, variable sales allocation, customer service, automated retail catering, whole loan processing, activity-based costing, order management, retail sales analysis, network services provisioning, retail P&L reporting, automated work management, and quality assurance.

Marketing and Sales

Sapient markets its services through a direct sales force in the U.S. and Canada.

Clients

A representative list of clients includes:

Au Bon Pain
Bank of America
Bank of Boston
Cardinal Health
Cooper Tire & Rubber
CompuServe
Digital Equipment Corp.
Ernst & Young
Fidelity Investments
Hewlett-Packard
Merrill Lynch & Company
Owens Corning
Pacific Bell
PSG&E of New Jersey
Sprint Corporation
State of Maine
Wells Fargo

© INPUT 1996. Reproduction prohibited.

INPUT Assessment

Sapient's strengths lie in its methodology and process for implementing new systems. Many of its clients are tired of the cumbersome traditional method for implementing new systems, or haven't the time to implement systems in the traditional manner.

Sapient is still a young company that needs to grow and develop. It appears to be large enough to deliver systems, yet small enough to be flexible and respond quickly to client requirements.

© INPUT 1996 Reproduction prohibited.

SATELLITE COMPUTING, INC. (SATCOM)
4521 Professional Circle
Virginia Beach, VA 23455
(804) 499-9803

Talmadge F. Broughton, President and CEO
Private Corporation
Total Employees: 48
Total Revenue, Fiscal Year End 3/31/91: $3,750,000*

*INPUT estimate

The Company

SATCOM, founded in 1968, provides application software products and associated support services for the distribution, manufacturing, and financial industries.

Key Products and Services

Approximately 70% of SATCOM's fiscal 1991 revenue was derived from application software product sales. The remaining 30% was derived from support services provided to software clients--including consulting, software customization, implementation, and education and training.

SATCOM provides the following software products for the HP 3000 environment:

- The Business Operations Support System (BOSS/3000), introduced in 1981, consists of six integrated modules.
 - Modules are available for order processing, accounts payable, accounts receivable, purchasing/receiving, inventory control, and general ledger applications.
 - Optional features include DRP, EDI, bar coding, product configuration, manufacturing interface, truck load/route planning, and forecasting.
 - There are currently more than 125 installations of BOSS/3000.
- Purchasing and Stores Inventory (PSI/3000), introduced in 1986, is a purchasing and materials management system designed to address the requirements of maintenance, repair, and operating (MRO) inventory environments.
 - The system has integrated purchasing, materials management, and financial control modules. Optional

Copyright 1991 by INPUT. Reproduction Prohibited.

modules include accounts payable, general ledger, and maintenance management.

- There are currently more than 25 installations of PSI/3000.

- World Class Financial Systems, acquired in 1988 from McCormack & Dodge, consists of four separate modules.
 - Modules are available for accounts payable, general ledger, fixed assets, and purchasing.
 - There are currently more than 150 installations of World Class Financial Systems.
- PM/plus, a maintenance management system, was introduced in 1991. PM/plus can run in a standalone environment or interface with SATCOM's PSI/3000 to form a complete solution with materials management.

Industry Markets

Approximately 50% of SATCOM's fiscal 1991 revenue was derived from the distribution industry, 40% from the manufacturing industry, and 10% from the financial industry.

Geographic Markets

Approximately 95% of SATCOM's fiscal 1991 revenue was derived from the U.S. and 5% from Canada and Mexico.

In addition to its headquarters in Virginia Beach, SATCOM has a support office in the Atlanta area and a sales and support office in the Northern California Bay Area.

Computer Hardware and Software

SATCOM has two HP 3000 minicomputers, running under MPE, installed at its headquarters. In 1991, the company installed a UNIX-based HP 9000 system as a development machine for future products.

The company also has an HP 3000 installed at each of its offices in Atlanta and Northern California.

Copyright 1991 by INPUT. Reproduction Prohibited.

SATELLITE COMPUTING, INC. (SATCOM)
4521 Professional Circle
Virginia Beach, VA 23455
(804) 499-9803

Talmadge F. Broughton, President and CEO
Private Corporation
Total Employees: 42
Total Revenue, Fiscal Year End 3/31/90: $3,500,000*

*INPUT estimate

The Company

SATCOM, founded in 1968, provides application software products and associated support services for the distribution, manufacturing, and financial industries.

Key Products and Services

Approximately 80% of SATCOM's fiscal 1990 revenue was derived from application software product sales. The remaining 20% was derived from support services provided to software clients, including consulting, software customization, implementation, and education and training.

SATCOM provides the following distribution software products for the HP 3000 environment:

- The Business Operations Support System (BOSS/3000), introduced in 1980, consists of six modules integrated into one data base.
 - Modules are available for order processing, accounts payable, accounts receivable, purchasing/receiving, inventory control, and general ledger applications.
 - There are currently more than 125 installations of BOSS/3000.
- Purchasing and Stores Inventory (PSI/3000), introduced in 1986, is a purchasing and materials management system designed to address the requirements of maintenance repair operating (MRO) environments.
 - The system has integrated purchasing, materials management, financial control, and maintenance modules and can use BOSS/3000 modules for accounts payable and general ledger applications.

Copyright 1990 by INPUT. Reproduction Prohibited.

- There are currently more than 25 installations of PSI/3000.

SATCOM provides the following financial software product for the HP 3000 environment:

- World Class Financial Systems, acquired in 1988 from McCormack & Dodge, consists of four separate modules.
 - Modules are available for accounts payable, general ledger, fixed assets, and purchasing.
 - There are currently more than 150 installations of World Class Financial Systems.

During the fourth quarter of 1990, SATCOM introduced BOSS/400, a manufacturing distribution software product for the IBM AS/400 environment.

- BOSS/400 supports the distribution of manufactured products. The integrated system includes modules for order management, inventory management, and purchasing.

SATCOM no longer markets the Quality and Manufacturing System (QMS) for quality assurance and materials usage/management. The product, now called Q-CIM, is now marketed by the developer, Q-CIM Development Labs, Inc. of Princeton (NJ).

Industry Markets

Approximately 60% of SATCOM's fiscal 1990 revenue was derived from the distribution industry, 30% from the manufacturing industry, and 10% from the financial industry.

Geographic Markets

Approximately 95% of SATCOM's fiscal 1990 revenue was derived from the U.S. and 5% from Canada and Mexico.

In addition to its headquarters in Virginia Beach, SATCOM has a support office in the Atlanta area and a sales and support office in the Northern California Bay Area.

Computer Hardware and Software

SATCOM has two HP 3000 minicomputers, running under MPE, installed at its headquarters.

The company also has an HP 3000 installed at each of its offices in Atlanta and Northern California.

Copyright 1990 by INPUT. Reproduction Prohibited.

SATELLITE COMPUTING, INC. (SATCOM)
4521 Professional Circle
Virginia Beach, VA 23455
(804) 499-9803

Talmadge F. Broughton, President and CEO
Private Corporation
Total Employees: 30
Total Revenue, Fiscal Year End 3/31/88: $2,500,000*

* INPUT estimate

The Company

Satellite Computing, Inc. (SATCOM), founded in 1968, provides HP 3000-based application software products and associated support services for the distribution, manufacturing, and financial industries.

SATCOM recently acquired the World Class Financial Systems application software package from McCormack & Dodge Corporation.

SATCOM currently has 30 employees.

Key Products and Services

Approximately 80% of SATCOM's fiscal 1988 revenue was derived from application software products sales. The remaining 20% of fiscal 1988 revenue was derived from support services provided to software clients, including consulting, software customization, implementation, and education and training.

SATCOM provides the following distribution software products for the HP 3000 environment:

- SATCOM's Business Operations Support System (BOSS/3000), introduced in 1980, consists of six modules integrated into one database.
 - Modules available include Order Processing, Accounts Payable, Accounts Receivable, Purchasing/Receiving, Inventory Control, and General Ledger.
 - There are currently more than 100 installations of BOSS/3000.

Copyright 1988 by INPUT. Reproduction Prohibited.

- SATCOM's Purchasing and Sales Inventory (PSI/3000), introduced in 1986, consists of three modules integrated into a single product.

 - PSI/3000 is a purchasing and materials management system designed to address the requirements of maintenance repair operating (MRO) environments.

 - There are currently more than 25 installations of PSI/3000.

SATCOM provides the following manufacturing software product for the HP 3000 environment:

- SATCOM's Quality and Manufacturing System (QMS), introduced in 1981, is a software package for the process and manufacturing industry. QMS is designed for quality assurance and materials usage/management.

 - This integrated system includes four modules: Quality Specifications, Materials Management, Order Processing, and Production Management Reporting.

 - There are currently more than 35 installations of QMS.

SATCOM provides the following financial software product for the HP 3000 environment:

- SATCOM's World Class Financial Systems, acquired in 1988 from McCormack & Dodge, consists of four separate modules.

 - Modules available include Accounts Payable, General Ledger, Fixed Assets, and Purchasing.

 - There are currently more than 150 installations of World Class Financial Systems.

CPU-based pricing for SATCOM's products is available upon request.

SATCOM's software product offerings are summarized in Exhibit A.

Copyright 1988 by INPUT. Reproduction Prohibited.

EXHIBIT A

SATCOM APPLICATION SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	NUMBER INSTALLED	OPERATING ENVIRONMENT
BOSS/3000	Order Processing, Accounts Payable, Accounts Receivable, Purchasing/Receiving, Inventory Control, and General Ledger.	100+	HP 3000
PSI/3000	Purchasing and materials management system.	25+	HP 3000
QMS	Quality assurance and materials usage/management.	35+	HP 3000
World Class Financial Systems	Accounts Payable, General Ledger, Fixed Assets, and Purchasing.	150+	HP 3000

Industry Markets

Approximately 70% of SATCOM's fiscal 1988 revenue was derived from the distribution industry, 20% from the manufacturing industry, and 10% from the financial industry.

Geographic Markets

Approximately 95% of SATCOM's fiscal 1988 revenue was derived from the U.S. Approximately 5% was derived from Canada.

Computer Hardware and Software

SATCOM has one HP 3000 minicomputer, running under MPE, installed at its Virginia Beach headquarters.

Copyright 1988 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SATELLITE COMPUTING, INC.
(SATCOM)
4521 Professional Circle
Virginia Beach, VA 23455
(804) 499-9803

Talmadge F. Broughton, President and CEO
Private Corporation
Total Employees: 40
Total Revenue, Fiscal Year End 3/31/85: $3,500,000*

THE COMPANY

- Satellite Computing, Inc. (SATCOM), founded in 1968, provides HP 3000-based application software products and associated support services for the distribution and manufacturing industries.

- INPUT estimates that SATCOM's fiscal 1985 revenue was approximately $3.5 million and that the average annual growth rate has been approximately 10% for the last three fiscal years.

- SATCOM currently has 40 employees.

KEY PRODUCTS AND SERVICES

- Approximately 80% of SATCOM's fiscal 1985 revenue was derived from application software products sales. The remaining 20% of fiscal 1985 revenue was derived from various support services provided to software clients, including consulting, software customization, and education and training.

- SATCOM provides the following distribution and manufacturing software products for the HP 3000 environment:

 - SATCOM's Business Operations Support System (BOSS/3000), introduced in 1980, consists of six modules integrated into one data base.

 - Modules available include Order Processing, Accounts Payable, Accounts Receivable, Purchasing/Receiving, Inventory Control, and General Ledger.

 - There are currently more than 50 installations of BOSS/3000.

 - SATCOM's Quality and Manufacturing System (QMS), introduced in 1981, is a software package for the process manufacturing industry. QMS is designed for quality assurance and materials usage/management.

*INPUT estimate

©1986 by INPUT. Reproduction Prohibited.

 - This integrated system includes four modules: Quality and Specifications, Materials, Order Processing, and Production Management Reporting.
 - There are currently about 15 QMS installations.

- Pricing for SATCOM's products is available upon request.

INDUSTRY MARKETS

- Approximately 60% of SATCOM's fiscal 1985 revenue was derived from the manufacturing industry. The remaining 40% was derived from the distribution industry.

GEOGRAPHIC MARKETS

- Approximately 95% of SATCOM's fiscal 1985 revenue was derived from the U.S.; approximately 5% was derived from Canada.

COMPUTER HARDWARE AND SOFTWARE

- SATCOM has one HP 3000 minicomputer, running under MPE, installed at its Virginia Beach headquarters.

©1986 by INPUT. Reproduction Prohibited.

Dropped

COMPANY HIGHLIGHT

SAVINGS MANAGEMENT COMPUTER CORP.
60 Congress Street
Boston, MA 02109
(617) 423-0850

Arthur E. Lemay, President
Private corporation
Total employees: 58
Total revenues, fiscal year end 12/31/76: $3.5 million

12/31/79 → $4.4

COMPANY BACKGROUND

- Savings Management Computer Corporation (SMCC) was chartered in Massachusetts in 1969 as a bank services company restricted to providing services to depository institutions (commercial and savings banks, savings and loan associations, and credit unions). It was established by four financial institutions.

- All revenues are generated by remote facilities management contracts to 48 thrift institution users.

OVERALL ASSESSMENT

- In fiscal year 1975, SMCC had an accumulated deficit equal to approximately $5 million. In fiscal year 1976, SMCC had net profits of $500,000. Similar profits are anticipated in 1977. By fiscal year end 1979, all debt will have been discharged.

- Company management claims 25% of the New England thrift processing market and expects to increase market share in fiscal year 1977 as a result of its product innovation and support.

- Major competitors are Bankers Data Processing, NCR, and State Street Bank & Trust Co. in Boston.

- The majority of new users are obtained through referral although SMCC does advertise.

KEY PRODUCTS AND SERVICES

- SMCC provides remote facilities management to its users. Services include savings, mortgage, installment loan, club accounting, revolving credit, custom reports, tax processing, and online terminal access.

© Copyright 1977 by INPUT, Menlo Park, CA
Reproduction Prohibited
April/1977

 - The savings information systems, processing 1.5 million savings accounts, generates approximately 40% of total revenues. It provides automated payroll savings input, NOW account processing, early teller cut-off, money orders and treasurer's checks, certificate of deposit maturity schedules, and permanent dividend order checks.

 - SMCC currently supports 30 remote service units (RSUs), the thrift institution equivalent of a commercial bank automated teller machine (ATM).

- SMCC introduced two services in 1976: a central information file (CIF) for six banks, and a new NOW account processing application.

- In 1977, SMCC will extend its CIF and begin offering these services:

 - preauthorized withdrawal

 - electronic funds transfer

 - interface with Point-of-Sale machines and credit and debit cards

 - extension of its RSU support

APPLICATIONS: SMCC provides only specialty banking applications processing.

INDUSTRY MARKETS

- SMCC users are all thrift institutions: 38 mutual savings banks, 9 federal savings and loan associations and trust companies, and 1 credit union.

- In 1978 the company plans to expand its services to commercial banks. Charter restrictions prohibit SMCC from offering services to other industries.

GEOGRAPHIC MARKETS: SMCC has 38 users in the Boston area, 8 in New Hampshire, and 1 each in New York and Connecticut. New Hampshire, New York, and Connecticut will provide the majority of new users.

© Copyright 1977 by INPUT, Menlo Park, CA
Reproduction Prohibited
April/1977

COMPUTER HARDWARE AND SOFTWARE

- SMCC uses IBM 360/65 and 360/50 mainframes for its services.
- It uses Storage Technology Corporation disk drives and Calacomp tape drives. It supports IBM, Bunker Ramo, TRW, NCR, Olivetti, and Data Saab terminals, and a variety of remote services units.

© Copyright 1977 by INPUT, Menlo Park, CA
Reproduction Prohibited
April/1977

SAZTEC INTERNATIONAL, INC.
6700 Corporate Drive
Kansas City, MO 64120
(816) 483-6900

Robert P. Dunne, Chairman
Gary N. Abernathy, Vice Chairman
Richard C. Thompson, President and COO
Public Corporation, NASDAQ
Total Employees: 550 (12/90)
Total Revenue, Fiscal Year End
6/30/90: $16,289,300

The Company

SAZTEC International, Inc. provides a range of data base conversion and associated processing services primarily to the telephone utility and electronic publishing markets.

Recent acquisition/divestiture activity is summarized as follows:

- As of November 8, 1990, Chairman and CEO Thomas L. Reed resigned from SAZTEC. In exchange for 950,000 shares of SAZTEC stock, Mr. Reed received SAZTEC lines of business representing litigation support, white/yellow pages directory, and hospital conversion markets within the U.S. Overall, these lines were not a substantial portion of SAZTEC's business, contributing about 3% to fiscal 1990 revenue.

- In October 1990, SAZTEC completed the acquisition of Advanced Automation Associates, Inc. (AAA) of Chelmsford (MA). Terms of the purchase were not disclosed.

 - AAA, with approximately 200 employees, provides data conversion, data base management, and direct marketing services.

 - AAA has four processing centers in the New England area and an affiliation with a Jamaican data conversion company.

- In January 1990, SAZTEC decided to discontinue the operations of its Hardware Division due to increased competition and decreased margins. SAZTEC completed the disposal by June 30, 1990.

 - The Hardware Division remarketed used IBM and STC computer equipment and contributed approximately $908,000, $1.0 million, and $1.2 million to revenue for fiscal 1990, 1989, and 1988, respectively.

Copyright 1991 by INPUT. Reproduction Prohibited.

- SAZTEC incurred operating losses of $193,319 during the disposal period and a total loss on disposal of $212,564.

SAZTEC's fiscal 1990 revenue was $16.3 million, a 14% decrease from $19.0 million for fiscal 1989. Net losses of $598,518 include expenses of $676,800 for the loss on the discontined Hardware Division and the write-down of a leveraged lease investment (for an IBM 3090 system). A five-year financial summary follows:

SAZTEC INTERNATIONAL, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	6/90	6/89	6/88	6/87	6/86
Revenue	$16,289	$19,030	$7,922	$5,507	$6,258
• Percent change from previous year	(14%)	140%	44%	(12%)	70%
Income (loss) from continuing operations	$(336)	$1,056	$(1,278)	$(202)	$478
• Percent change from previous year	(132%)	183%	(533%)	(142%)	180%
Net income (loss)	$(598)	$1,028	$(1,152)	$(180)	$399
• Percent change from previous year	(158%)	189%	(540%)	(145%)	105%
Earnings (loss) per share	$(0.17)	$0.30	$(0.36)	$(0.07)	$0.21
• Percent change from previous year	(157%)	183%	(614%)	(133%)	110%

SAZTEC management attributes fiscal 1990 results to the following:

- A 27% decrease in telephone utility business was due to a four-month work stoppage at a client which caused SAZTEC to delay starting production on a contract. Revenue from long-term contracts with telephone utilities is recognized using the percent of completion, units of delivery method. Two contracts were completed in the second quarter of fiscal 1990 with the new contract not commencing production until the third quarter.

- Electronic publishing revenue rose 10% due to the successful development of the European marketplace. During 1990, SAZTEC Europe, the company's European subsidiary, shipped

Copyright 1991 by INPUT. Reproduction Prohibited.

the first two compact disks of the British Library catalogue. The third and final disk is expected to be delivered in February 1991. As of June 30, 1990, 102 sets had been ordered by customers, generating $981,000 of revenue.

- Net losses were attributed to the non-operating losses from the investment in the leveraged lease and discontinued operations (Hardware Division).

- Included in cost of services in fiscal 1990 is $193,700 of development costs related to the Information Conversion Express (ICE) service. There were no development costs incurred during fiscal 1989 or 1988.

Revenue for the three months ending September 30, 1990 reached nearly $6 million, a 36% increase over $4.4 million for the same period in 1989.

- Net income for the period reached $83,170 and represented a return to profitability for the company from losses experienced during fiscal 1990.

- SAZTEC management attributed the results to the acquisition of Advanced Automation Associates, as well as increased revenues in other lines of business and reduced overhead expenses.

SAZTEC's principal subsidiaries include:

- SAZTEC Europe Ltd. is a 51% owned subsidiary that markets SAZTEC's services in Europe.

- SAZTEC Scotland Ltd. is a wholly owned subsidiary that provides data entry, coding, editing, and data conversion services for SAZTEC and SAZTEC Europe Ltd.

As of June 1990, SAZTEC had 347 full-time and 32 part-time employees. The company currently has 550 employees.

Key Products and Services

Approximately 94% of SAZTEC's fiscal 1990 revenue was derived from data base conversion processing and associated support services. The remaining 6% was derived from equipment sales and other services.

The services provided by SAZTEC restructure or convert a customer's information base to a data base structure on new or existing computer systems. As part of its conversion services,

Copyright 1991 by INPUT. Reproduction Prohibited.

SAZTEC performs some or all of the following tasks, depending on client requirements:

- Data base system analysis and design
- Specification development
- Custom software design
- Microfilming
- Clerical coding
- Data entry
- Optical or image scanning of the data
- Reformatting of existing magnetic data
- Editing
- Reporting
- Processing

SAZTEC's data conversion methods include CD ROM formatting, photocomposition restructure, optical character recognition (OCR), and digital image scanning.

- SAZTEC has implemented image capture in conjunction with high-speed data transmission facilities to provide an improved ability to rapidly transfer work to its overseas operations. This new service, called Information Conversion Express (ICESM), will enable the company to service additional as well as existing clients with fast turnaround requirements at more competitive prices.

The services provided by SAZTEC frequently extend over a period of months or years, depending on the size of the project, the requirement for adding information to the initial data base, processing of updated information superseding the previous information in the data base or the necessity to change or add to the system by which the data is used.

- In the telephone utilities industry, the scale of projects usually requires a multiyear involvement by the company to handle the large volumes of information to be computerized and the length of time required to obtain microfilm copies of the client's information files.

Recent projects include the following:

- During 1990, SAZTEC introduced the first two of three compact disks of the bibliographic information of the British Library.

- In June 1990, SAZTEC announced the signing of an agreement

Copyright 1991 by INPUT. Reproduction Prohibited.

with the British Broadcast Corporation (BBC) to electronically capture the Gramophone Library catalog index.

- In November 1990, SAZTEC announced the signing of an agreement with Knowledge Access International for the conversion of the document collection of the Consultative Group for International Agricultural Research (CGIAR). SAZTEC will convert CGIAR to electronic format for publication by Knowledge Access International on CD ROM.

Industry Markets

SAZTEC's fiscal 1990 revenue was derived approximately as follows:

SAZTEC INTERNATIONAL, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	6/90		6/89		6/88	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Electronic publishing	$8.2	50%	$7.5	39%	$4.5	56%
Telephone utility	6.7	41%	9.2	48%	1.4	18%
Other	1.4	9%	2.3	13%	2.0	26%
TOTAL	**$16.3**	**100%**	**$19.0**	**100%**	**$7.9**	**100%**

Telephone Utilities:

SAZTEC has been providing services to telephone companies since 1976, generally pursuant to multiple-year agreements. During fiscal 1990, SAZTEC had four telephone companies under contract. Two contracts were completed during fiscal 1990 and a new contract was obtained. Of the two contracts currently in production, management expects one to be completed in 1991 and the other to be completed in 1992 or 1993. The company also expects to receive one additional contract during fiscal 1991.

Electronic Publishing:

SAZTEC provides services in this area to publishers, on-line information vendors, trademark research companies, market research companies, libraries, and abstracting/indexing companies.

Copyright 1991 by INPUT. Reproduction Prohibited.

- Companies involved in this segment compile, input, and update large historical and current volumes of information, such as newspaper stories, literature, or research data accessed by users at terminals.

- During fiscal 1990, SAZTEC provided services to approximately 50 clients in this segment.

Geographic Markets

Approximately 79% of SAZTEC's fiscal 1990 revenue was derived from the U.S. and 21% from international sources. A three-year geographic financial summary follows:

SAZTEC INTERNATIONAL, INC.
THREE-YEAR GEOGRAPHIC FINANCIAL SUMMARY

	FISCAL YEAR					
	6/90		6/89		6/88	
ITEM	$ MILLIONS	PERCENT OF TOTAL	$ MILLIONS	PERCENT OF TOTAL	$ MILLIONS	PERCENT OF TOTAL
Revenue						
- U.S.	$12.9	79%	$16.4	86%	$5.9	74%
- U.K.	3.4	21%	2.6	14%	2.0	26%
	$16.3	100%	$19.0	100%	$7.9	100%
Operating earnings (loss)						
- U.S.	$(380)	83%	$991	81%	$(1,617)	102%
- U.K.	(77)	17%	231	19%	33	(2%)
	$(457)	100%	$1,222	100%	$(1,584)	100%

Domestic and foreign production facilities in Kansas City (MO), Dayton (OH), and Ardrossan (Scotland) provided the data entry and coding functions for approximately 72% of the company's cost of revenue during fiscal 1990. The remainder is performed by subcontractors, primarily SAZTEC Philippines, Inc.

- With the acquisition of Advanced Automation Associates during 1990, SAZTEC added production facilities in Chelmsford and Braintree (MA) and Vernon and Stratford (CT).

Sales offices are located in Annapolis (MD), Chesterfield and Kansas City (MO), Dayton (OH), Eugene (OR), King of Prussia (PA), Chelmsford (MA), Los Alamitos (CA), and London (England).

Copyright 1991 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO PROFILE DATED APRIL 1987

SAZTEC INTERNATIONAL, INC.
27520 Hawthorne Boulevard
Suite 170
Rolling Hills Estates, CA 90274
(213) 544-0337

Thomas L. Reed, Chairman and President
Public Corporation, OTC
Total Employees: 73
Total Revenue, Fiscal Year End 6/30/87: $5,616,000

SAZTEC INTERNATIONAL, INC.
FOUR-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM / FISCAL YEAR	6/87	6/86	6/85	6/84
Revenue	$ 5,616	$ 6,258	$ 3,671	$ 2,373
. Percent increase (decrease) from previous year	(10%)	70%	55%	61%
Income (loss) before taxes and extraordinary item	$ (178)	$ 1,003	$ 241	$ (94)
. Percent increase (decrease) from previous year	(118%)	316%	356%	-
Net income (loss)	$ 15	$ 399 (a)	$ 195	$ (92)
. Percent increase (decrease) from previous year	(96%)	105%	312%	-
Earnings (loss) per share	$ 0.01	$ 0.42 (a)	$ 0.20	$ (0.10)
. Percent increase (decrease) from previous year	(98%)	110%	300%	-

(a) Includes net losses of $79,000, or $0.08 per share, related to the discontinued operations of Saztext, Inc., a SAZTEC subsidiary that provided data conversion services using stenagraphic court reporter equipment.
- Due to the high cost of such equipment and the necessary operatar retraining, the service was discontinued effective June 30, 1986.
- Saztext cantributed appraximately $7,000 ta SAZTEC's fiscal 1986 revenue.

- SAZTEC management attributes the decrease in fiscal 1987 revenue primarily ta the early terminatian af twa telephane utility contracts. The cantracts were terminated due ta the clients' decision ta perfarm data entry functians in-house.

©1987 by INPUT. Reproduction Prohibited.

- Revenue for the three months ending September 30, 1987, reached $1.6 million, an increase of 33% over the same period in 1986. Net losses were $362,348, compared to net income of $44,580 for the same period a year ago.

- The following events have taken place since fiscal 1986:

 - In July 1987, SAZTEC acquired Leggett-Meyer, Inc., a Dayton (OH)-based data processing firm.

 - In July 1987, SAZTEC established a Canadian subsidiary, SAZTEC Canada Limited.

 - In May 1987, SAZTEC acquired certain assets and the businesses of Information Control, Inc., Ultra-Tech Systems, Inc., and Information Communications, Inc. (The ICI Group) in exchange for 100,000 shares of SAZTEC's common stock.

 - The ICI Group, located in Kansas (MI), provides data conversion, optical scanning and processing, and software development services.

SOURCE OF REVENUE

- One hundred percent of SAZTEC's fiscal 1987 revenue was derived from data base conversion processing and associated support services.

- Approximately 34% of SAZTEC's fiscal 1987 revenue was derived from telephone companies, 50% from electronic publishers, 9% from the healthcare industry, and the remaining 7% from other industries. A three-year summary of source of revenue by industry follows ($ thousands):

FISCAL YEAR / ITEM	6/87		6/86		6/85	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Telephone utility	$1,897	34%	$3,058	49%	$946	26%
Electronic publishing	2,850	50	2,679	43	2,324	63
Healthcare	494	9	521	8	401	11
Other	375	7	-	-	-	-
Total	$5,616	100%	$6,258	100%	$3,671	100%

©1987 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SAZTEC INTERNATIONAL, INC.
27520 Hawthorne Boulevard
Suite 170
Rolling Hills Estates, CA 90274
(213) 544-0337

Thomas L. Reed, Chairman and President
Public Corporation, OTC
Total Employees: 23
Total Revenue, Fiscal Year End 6/30/86: $6,258,000

THE COMPANY

- SAZTEC International, Inc., founded in 1976 as Saztec Corporation, provides a range of data base conversion and associated processing services to the telephone utility, electronic publishing, and health care industries.

- In November 1986, SAZTEC made an initial public offering of 500,000 shares of common stock. Net proceeds of approximately $2.6 million will be used to expand marketing and technical support, to expand production facilities, to repay debt, for product development, and for working capital.

- Fiscal 1986 revenue reached $6.3 million, a 70% increase over fiscal 1985 revenue of $3.7 million. Net income rose 105% from $195,000 in fiscal 1985 to $399,000 in fiscal 1986. A three-year financial summary follows:

©1987 by INPUT. Reproduction Prohibited.

SAZTEC INTERNATIONAL, INC.
THREE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	6/86	6/85	6/84
Revenue	$ 6,258	$ 3,671	$ 2,373
. Percent increase from previous year	70%	55%	61%
Income (loss) before taxes and extraordinary item	$ 1,003	$ 241	$ (94)
. Percent increase from previous year	316%	356%	-
Net income (loss)	$ 399 (a)	$ 195	$ (92)
. Percent increase from previous year	105%	312%	-
Earnings (loss) per share	$ 0.42 (a)	$ 0.20	$ (0.10)
. Percent increase (decrease) from previous year	110%	300%	-

(a) Includes net losses of $79,000, or $0.08 per share, related to the discontinued operations of Saztext, Inc., a SAZTEC subsidiary that provided data conversion services using stenographic court reporter equipment.
- Due to the high cost of such equipment and the necessary operator retraining, the service was discontinued effective June 30, 1986.
- Saztext contributed approximately $7,000 to SAZTEC's fiscal 1986 revenue.

- SAZTEC management attributes revenue increases to active marketing efforts and the ability to provide a range of computer services (including systems design, conversion, and mainframe processing).
 - Revenue from the telephone utility industry increased 223% in fiscal 1986 over 1985 and 295% in fiscal 1985 over 1984 partly as a result of the "breakup" of AT&T and an increased number of telephone companies requiring SAZTEC's services.
- SAZTEC currently has five subsidiaries as follows:
 - Saztec Computer Services Corporation, headquartered in Dayton (OH), provides programming, processing support, and technical marketing support services.

©1987 by INPUT. Reproduction Prohibited.

- Saztec U.S.A. provides administrative services, contracting, project management, personnel management, marketing, and technical support for the company.

- Saztec Europe, Ltd. (a 51%-owned subsidiary) markets the company's services in Europe.

- Saztec Scotland, Ltd. provides production, data entry, coding, and project management for Saztec Europe.

- Saztec Corporation is inactive at present.

- As of June 1986, SAZTEC and its subsidiaries had approximately 23 full-time employees. The company currently employs 29 full-time employees (U.S. and in Europe) as follows:

Marketing	9
Technical support	7
Administrative services	13
	29

 - In addition to the employees listed above, data entry and clerical coding activities are performed (through subcontracts with unaffiliated companies in the Philippines, Singapore, and Jamaica) by approximately 700 persons.

 - SAZTEC services are also supported by approximately 130 persons from several affiliated companies that have common shareholders and officers.

- SAZTEC management believes there is no other vendor that provides the same range of services provided by SAZTEC. The company does compete with McDonnell Douglas Information Systems Group, Computer Sciences Corporation, and Sterling Software in the area of conversion services.

KEY PRODUCTS AND SERVICES

- One hundred percent of SAZTEC's fiscal 1986 revenue was derived from data base conversion processing and associated support services. The services provided by the company restructure or convert a customer's information base to a data base structure on new or existing computer systems.

 - An estimated 40% of revenue is derived from technical support services provided by SAZTEC staff. These services include systems analysis, specification development, custom software design, data conversion, microfilming and processing, editing, reformatting, and management reporting.

©1987 by INPUT. Reproduction Prohibited.

- An estimated 60% of revenue is derived from production activities that may be contracted out or provided by SAZTEC staff. These services include clerical coding of customer information and data entry.

 . SAZTEC contracts for data entry and clerical coding from corporations located in the Philippines, Singapore, and Jamaica.

 . The company furnishes these services in Europe through Saztec Scotland Ltd. and plans to establish company-owned production facilities or expand existing facilities in the U.S., Canada, and the Caribbean.

- SAZTEC provides its services to the telephone utilities, electronic publishing, and health care markets.

 - Since 1984, when the government deregulated the telephone industry, SAZTEC has expanded its services, marketing emphasis, and technical support into this area. While SAZTEC also provides services to independent telephone companies and markets to gas and other power utilities, the seven regional telephone operating companies constitute the company's most significant market.

 . Contracts typically range from two to eight years and provide for the conversion of the telephone company's engineering, operations, and customer information to a form that may be used economically and efficiently in the telephone company's computer systems.

 . SAZTEC currently has three multi-year contracts providing services to customers in the telephone utilities area with a total dollar amount of $5.9 million. Two contracts expire at the end of fiscal 1989. The aggregate anticipated billings of these contracts for the fiscal years ended June 30, 1987, 1988, and 1989, are $2.5 million, $2.5 million, and $800,000, respectively.

 . SAZTEC management believes that the international market for computer-related telephone services, principally in Canada and Europe, represents a substantial market for the company's services. The company intends to establish a Canadian subsidiary during fiscal 1987 or 1988.

 - SAZTEC currently has 21 contracts with customers in the electronic publishing area to provide data base preparation, data entry, data conversion, and follow-up services.

 . Companies involved in this industry compile, input, and update large historical and current volumes of information, such as newspaper stories, literature, or research data accessed by users at terminals. Clients include publishers, on-line information vendors, trademark research companies, market research companies, libraries, and abstracting/indexing companies.

©1987 by INPUT. Reproduction Prohibited.

- Specific services provided include the conversion of full text of newspaper and magazine articles for loading on to an on-line system; preparation of typesetting tapes for production of printed copy; the conversion for on-line vendors of archival files of abstracts and indexes with monthly additions to the data base from newly published material; for market researchers, ongoing capture and processing of customer billings and data for analysis and publication; and for libraries, retrospective conversion of card catalog data to a local system, and conversion of hand printed worksheets for loading to a national computer network for research libraries.

- In 1986, SAZTEC entered into a "teaming" or joint marketing agreement with Reference Technology, Inc. which provides for joint services to customers, whereby SAZTEC will provide data base preparation, data entry and data conversion services, and Reference Technology will provide products and services for read only optical disk applications.

- SAZTEC recently signed a four-year contract with the British Library, valued at approximately $3 million (U.S.), plus a ten-year optical product publishing contract for exclusive worldwide rights to distribute the British Library's catalogue on optical media.

- SAZTEC provides its services directly to individual hospitals or hospital systems, or by contracting with hardware, software, or other service companies providing services to the health care industry.

 - The company generally enters into contracts with individual hospitals having a three- to six-month term, providing for service to one or more clinical departments in a hospital. During fiscal 1985 and 1986, SAZTEC furnished services to 29 hospitals and 8 vendors of hospital systems and services.

 - SAZTEC currently has seven contracts with hospitals, hospital clinics, and vendors and other customers in the health care industry to provide data base and on-going services.

 - In fiscal 1986, SAZTEC signed a one-year non-exclusive marketing agreement with the Dynamic Control division of Baxter Travenol Laboratories, Inc. to provide support services to convert medical record data to an automated system for Dynamic Control's client hospitals.

 - SAZTEC will microfilm, key, process, and create computer output from manual records and existing magnetic files.

©1987 by INPUT. Reproduction Prohibited.

- Pursuant to the non-exclusive marketing agreement, Dynamic Control recommends (but does not require) that a client hospital retain the services of SAZTEC.

- Services introduced or under development include the following:

 - SAZTEC has recently expanded its data conversion methods to include compact disk read-only memory (CD-ROM) formatting, photo-composition restructure, and optical character recognition (OCR).

 - The company is currently developing a capability to convert data provided by government agencies, such as transcripts of hearings, into formats suitable for distribution in on-line computer systems. This project is scheduled for completion in 1987.

 - The company is attempting to develop the capability to convert pages of library catalogs of literature to a format for distribution in on-line networks.

 - SAZTEC plans to apply digital page capture, pattern recognition, and text/image integration technologies to new and current service offerings.

 - SAZTEC also plans to develop electronic data bases on selected topics in conjunction with joint venture partners not affiliated with the company, and provide on-line access to such data bases on a fee-for-use basis through major distributors of electronic information.

INDUSTRY MARKETS

- Approximately 49% of SAZTEC's fiscal 1986 revenue was derived from telephone companies, 43% from electronic publishers, and 8% from the health care industry. A two-year summary of source of revenue follows ($ thousands):

FISCAL YEAR / ITEM	6/86		6/85	
	Revenue	Percent of Total	Revenue	Percent of Total
Telephone utility	$3,058	49%	$ 946	26%
Electronic publishing	2,679	43	2,324	63
Health care	521	8	401	11
Total	$6,258	100%	$3,671	100%

©1987 by INPUT. Reproduction Prohibited.

- Three customers, U.S. West Material Resources, Inc. (a subsidiary of U.S. West), Bell South Services, Inc., and Contel Services Corporation, together accounted for approximately 50% of SAZTEC's fiscal 1986 revenue.

GEOGRAPHIC MARKETS

- SAZTEC has U.S. regional/sales offices in Eugene (OR), King of Prussia (PA), Kansas City (MO), Landover (MD), and Dayton (OH).
- Foreign offices are located in England, Australia, and Scotland.

COMPUTER HARDWARE AND SOFTWARE

- SAZTEC has the following computers installed at its data center in Dayton:
 - 1 IBM 4341-2, MVS.
 - IBM System 36s.
 - IBM PC/XTs.
 - AT&T 3Bs, UNIX.
 - Fortune 32:16, UNIX.
 - Apple IIe.

©1987 by INPUT. Reproduction Prohibited.

COMPANY PROFILE

SCICOM DATA SERVICES, LTD.
(Formerly Scientific Computers, Inc.)
10101 Bren Road East
Minnetonka, MN 55343
(612) 933-4200

Richard A. Walter, Chairman and CEO
Public Corporation, OTC
Total Employees: 164
Total Revenue, Fiscal Year End
6/30/86: $13,607,936

THE COMPANY

- SCICOM Data Services, Ltd., founded in 1959, provides remote computing, direct mail marketing, and data conversion processing services to commercial customers primarily in the distribution, manufacturing, direct mail, and insurance industries.

 - Over the past several years, the company has increasingly focused its resources on complex direct mail programs as well as multiple location distribution systems requiring a heavy degree of communications between locations.

 - In late 1986 the company changed its name from Scientific Computers, Inc. to SCICOM to more accurately describe its business.

- Fiscal 1986 revenue was $13.6 million, a 6% decrease from fiscal 1985 revenue of $14.4 million. Net losses were $86,348, compared to net income of $566,803 in fiscal 1985. A five-year financial summary follows:

©1987 by INPUT. Reproduction Prohibited.

SCICOM DATA SERVICES, LTD.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	6/86	6/85	6/84	6/83	6/82
Revenue	$ 13,608	$ 14,443	$ 14,891	$ 13,261	$ 12,934
. Percent increase (decrease) from previous year	(6%)	(3%)	12%	3%	19%
Income (loss) before taxes	$ (180) (a)	$ 1,027	$ 2,369	$ 2,642	$ 3,136
. Percent increase (decrease) from previous year	(118%)	(57%)	(10%)	(16%)	10%
Net income (loss)	$ (86)	$ 567	$ 1,229	$ 1,337	$ 1,421
. Percent increase (decrease) from previous year	(115%)	(54%)	(8%)	(6%)	(5%)
Earnings (loss) per share	$ (0.08)	$ 0.46	$ 0.78	$ 0.84	$ 0.91
. Percent increase (decrease) from previous year	(117%)	(41%)	(7%)	(8%)	N/A

(a) In August 1985, SCICOM purchased substantially all the assets and assumed certain liabilities of St. John's Data Systems, Inc., a start-up firm supplying integrated data collection systems using proprietary software, personal computers, and bar code technology. The system was marketed principally to the printing industry. Activities as related to the printing industry were suspended at the end of the third fiscal quarter of 1986. Pre-tax losses attributable to the suspended operations during fiscal 1986 were approximately $600,000.

- SCICOM management attributes revenue declines in fiscal 1986 primarily to the loss of a large manufacturing data services customer in the first quarter of fiscal 1986. The decrease in revenue in fiscal 1985 and also some portion of the decrease in 1986 were attributed to declining sales to customers in agricultural-related businesses due to the depressed market of that industry segment. The decreases in both years were offset somewhat by increased services revenue from the company's direct mail customers.

 - Net losses were attributed primarily to the costs associated with the start-up and subsequent discontinuance of St. John's Data Systems activities relating to the printing industry (described above).

©1987 by INPUT. Reproduction Prohibited.

- Increased costs were also due to increased direct mail marketing services that are more labor-intensive than other processing services.

- Revenue for the six months ending December 31, 1986 was $7.2 million, a 9% increase over revenue of $6.7 million for the same period a year ago. Net income was $471,625 compared to $42,308 for the same period in 1985.

- SCICOM is structured as follows:

 - SCICOM's headquarters location in Minnetonka provides remote computing and direct mail marketing processing services.

 - Ketabular Processing Company, a division in Phoenix (AZ), provides data conversion services.

- As of June 30, 1986, SCICOM had approximately 164 full-time employees. The company currently employs approximately 190 people full-time, with temporary employees used in data conversion and direct mail as required by workload. Employees are segmented as follows:

Marketing/development/customer service	63
Data center/computer operations	25
Data entry	24
Printing/composition/inserting operations	56
General and administrative	22
	190

KEY PRODUCTS AND SERVICES

- One hundred percent of SCICOM's fiscal 1986 revenue was derived from remote computing, direct mail marketing, and data conversion processing services.

 - SCICOM focuses on service opportunities where there are requirements for:

 . High volume transaction processing.
 . Rapid turnaround requiring near immediate update and response.
 . Large data base updating, maintenance, and processing.
 . Processing and control of multiple projects.
 . Multiple location network communications.

- SCICOM's processing services provide industry-specific applications for the manufacturing, distribution, direct mail, and insurance sectors.

 - SCICOM has approximately 75 clients accessing its network from over 600 devices across the U.S.

©1987 by INPUT. Reproduction Prohibited.

- SCICOM manages complete direct mail programs for a number of firms. Services provided include data base management, list processing, full print, composition, and inserting operations.

 - Over the past two years, the company has developed a growing business of providing processing services to direct marketing firms.

 - SCICOM believes it has the capacity to become a leading provider in the industry for handling not only the order entry and invoicing requirements but the reporting and sales management of subscription, fulfillment, catalog, and continuity programs as they relate to direct merchants.

 - The company also offers customized services as requested.

- As an outgrowth of SCICOM services for distributors, the company has a growing business of producing price books for manufacturers and distributors in general and paper merchants in particular.

 - Over 50 paper merchants are presently under contract for the production of price books. As with SCICOM's direct mail services, SCICOM is a full service provider in that it uses its processing capabilities to collect, maintain, and update pricing data bases and then uses its printing (both conventional and laser) services for the physical production of books.

- SCICOM provides order entry, inventory, receivable, payroll, MRP, and scheduling services for a variety of wholesalers and retailers as well as a number of manufacturing firms and other service organizations.

 - A distribution system provides order entry, invoicing, inventory control, sales analysis, accounts payable, accounts receivable, general ledger, payroll, and direct mail applications.

 - A manufacturing system includes bill of materials, material requirements planning, shop control, inventory control, capacity planning, labor reporting, and master scheduling applications.

 - Most of its customers have multiple locations that impose a need for concurrent multiple location access and real-time transaction processing.

 - SCICOM has established interfaces for the unique requirements of its customers as demonstrated by the following:

 - For a distributor of records and tapes, SCICOM accepts bar coded labels, such that a central site can collect sales data from stores daily and update inventory and sales information for the entire company.

©1987 by INPUT. Reproduction Prohibited.

- For a parts distributor, SCICOM collects data from portable terminals in the hands of over 80 salespeople and consolidates data so that inventory and shipment can be managed throughout the system.

- Insurance applications available from SCICOM include premium and membership accounting and third-party administration.

- Batch data conversion work provided by SCICOM through its Ketabular Processing Company division includes name and address file conversions, inventories, and contract work for commercial tax return preparers.

INDUSTRY MARKETS

- SCICOM derives its revenue from wholesale and retail distribution, insurance, and discrete manufacturing industry sectors, plus any industry sector that uses direct marketing/direct response in its distribution scheme.

- Direct mail services provided to Minnesota Mutual Life Insurance Company accounted for approximately 30%, 25%, and 24% of SCICOM's total revenue in fiscal 1986, 1985, and 1984, respectively.

GEOGRAPHIC MARKETS

- One hundred percent of SCICOM's fiscal 1986 revenue was derived from the U.S.

COMPUTER HARDWARE

- SCICOM has a NAS 8063 installed at its headquarters in Minnetonka.

- Clients access SCICOM's network via leased lines or dial-up.

©1987 by INPUT. Reproduction Prohibited.

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
10260 Campus Point Drive
San Diego, CA 92121
(619) 546-6000

J.R. Beyster, Chairman and CEO
Larry Kull, President and COO
Employee Owned
Total Employees: 10,875 (Full-Time)
Total Revenue, Fiscal Year End
1/31/90: $1,022,221,000
Information Services Revenue:
$500,000,000*

*INPUT estimate

The Company

Science Applications International Corporation (SAIC), founded in 1969 as Science Applications, Inc. offers diversified research and engineering services as its primary product, with the researchers and managers themselves owning the company. The company offers technical and professional services in the fields of national security, energy, and environment and health. SAIC is also involved in the custom assembly of special-purpose computer systems and the manufacture of certain high technology products.

Information services provided by SAIC, which contributed an estimated $500 million to fiscal 1990 revenue, primarily include systems integration and professional services.

Because SAIC believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company, either by direct purchase or through several stock option plans. Since the stock is not publicly traded, liquidity is provided by the internal market operated four times a year by Bull, Inc., a wholly owned broker-dealer subsidiary.

Total fiscal 1990 revenue reached over $1 billion, an 18% increase over fiscal 1989 revenue of $865.1 million. Net income rose 20%, from $25.7 million in fiscal 1989 to $30.8 million in fiscal 1990. A five-year financial summary follows:

Copyright 1990 by INPUT. Reproduction Prohibited.

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR					
ITEM	1/90	1/89	1/88	1/87	1/86	CAGR
Revenue	$1,022.2	$865.1	$693.7	$599.7	$532.7	18%
• Percent increase from previous year	18%	25%	16%	13%	27%	
Income before taxes	$48.0	$42.3	$39.0	$35.5	$29.6	13%
• Percent increase from previous year	13%	8%	10%	20%	11%	
• Gross margin	5%	5%	6%	6%	6%	
Net income	$30.8	$25.7	$21.6	$18.0	$16.0	18%
• Percent increase from previous year	20%	19%	20%	13%	9%	
• Net margin	3%	3%	3%	3%	3%	
Earnings per share	$0.67	$0.57	$0.48	$0.41	$0.37	16%
• Percent increase from previous year	18%	19%	17%	11%	9%	

As shown below, the company's growth is directly related to receipt of contract awards and contract performance:

SAIC
CONTRACT ACTIVITY

	FISCAL YEAR		
NUMBER OF CONTRACTS	1/90	1/89	1/88
Awarded	3,739	2,980	2,285
Completed	2,823	1,783	1,937
In process at year end	5,783	3,686	2,489

The average value per contract awarded was $307,000 in fiscal 1990, compared to $274,000 in fiscal 1989, and $256,000 in fiscal 1988.

Copyright 1990 by INPUT. Reproduction Prohibited.

During fiscal 1990, the company had 30 active contracts with individual values over $10 million and 51 active contracts with individual values between $5 million and $10 million.

SAIC classifies its business into two segments:

- Technical Services include:
 - The design, development, and analysis related to defense policies; high-technology research; computer software and systems; tactical and strategic operations systems and support for military organizations; and manpower training programs.
 - Research, analysis, engineering, and technical services and software and systems for government agencies and industrial customers related to nuclear energy, alternative energy sources, and a range of environmental studies, as well as health and human development programs.
- Products and Other includes production of custom designed and standard products, such as data display devices, sensors and prototype instruments under contract for government agencies and industrial customers. These products incorporate SAIC-developed hardware and hardware manufactured by others.

A three-year summary of source of revenue by business segment follows:

SAIC
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1/90		1/89		1/88	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Technical Services						
- National Security	$587.2	57%	$553.2	64%	$445.5	64%
- Energy, Environment, and Health	343.8	34%	232.0	27%	187.3	27%
Products and other	88.7	9%	78.0	9%	57.8	8%
Interest income	2.5	--	1.9	--	3.1	--
TOTAL	**$1,022.2**	**100%**	**$865.1**	**100%**	**$693.6**	**100%**

Copyright 1990 by INPUT. Reproduction Prohibited.

During fiscal 1989, SAIC acquired the Software Products Division of Control Data Corporation, the Systems Engineering Center of M/A-COM, Inc. (which augments SAIC's C^3 services), and Falcon Associates, Inc. of McLean (VA), which adds to SAIC's C^3I expertise.

SAIC subsidiaries include:

- American Systems Engineering Corporation
- Bull, Inc.
- Carl T. Jones Corporation
- Falcon Associates, Ltd.
- SAIC Architects, Inc.
- SAIC Range Systems (formerly AMEX Systems)
- SAIC (Canada)
- SAIC (Virgin Islands)

As of January 31, 1990, SAIC had 10,875 employees, of which approximately 5,400 were involved with information services.

SAIC competitors for information services-related contracts include Computer Sciences Corporation and Planning Research Corporation.

Key Products and Services

INPUT estimates over 55% of SAIC's $500 million in information services revenue was derived from systems integration, 35% from professional services (including customized systems development and consulting), and the remaining 10% from processing services and software product sales.

Services are provided by SAIC in the areas of National Security, Energy, and Environment and Health, and are categorized as involving technology development and analysis, systems development and integration, and technical support services activities.

In the area of National Security, examples of professional services provided by SAIC include the following:

- Technology Development and Analysis
 - Strategic Defense Initiative (SDI). SAIC is the largest subcontractor to General Electric, systems engineer for the first deployment phase of the Strategic Defense System. SAIC is also a subcontractor on a U.S.-Japanese team led by Mitsubishi Heavy Industries, to develop a missile defense architecture for the Western Pacific Theater. SAIC is the

Copyright 1990 by INPUT. Reproduction Prohibited.

senior subcontractor of a team headed by Messerschmitt-Boelkow-Blohm GmbH that is developing a Theatre Missile Defense Architecture for Europe for the U.S. Army Strategic Defense Command.

- Surveillance/Electro-Optics Technology. In the area of SDI optical sensors, SAIC has joined with several teams to provide technology and subsystems, such as the Space Surveillance & Tracking System (teamed with TRW), the Boost Surveillance & Tracking System (teamed with Lockheed), and the SATKA Integrated Experiments (SIE) Control Center.

- Automated Nuclear Force Planning. SAIC developed an automated capability for nuclear force planning and was selected by the Defense Nuclear Agency to develop a modern, fully automated nuclear force planning system for the Supreme Headquarters, Allied Powers Europe.

- Army Model Development/Evaluation. SAIC is developing new models and assessing existing models for the U.S. Army Intelligence & Threat Analysis Center. SAIC recently developed automated flow-charting and flow-analysis tools to analyze large Army models written in SIMSCRIPT. The company is also developing a simulation that can be used by the center to assess tactical battle management.

- Submarine/Antisubmarine Warfare. For the eighteenth consecutive year, SAIC has provided hardware and software support to critical submarine and antisubmarine warfare programs, including technical and analytical support for both strategic and attack submarine programs, such as the U.S. Navy's future attack submarine the SSN-21 (SEAWOLF) class.

- Nuclear Weapons Effects. Since its inception, SAIC has been involved in nuclear weapons effects and has recently performed projects for the Defense Nuclear Agency.

- Nuclear Test Ban Verification. For the Defense Advanced Research Projects Agency, SAIC's Center for Seismic Studies is supporting the U.S. capability to verify test ban treaties. The company is also developing an expert system that will apply artificial intelligence technology to the seismic analysis methods required for test ban treaty monitoring.

- Center for Target Studies. SAIC's Center for Target and Geographic Studies offers support for target characterization

Copyright 1990 by INPUT. Reproduction Prohibited.

and targeting analysis, and a collection of map, target, and terrain data bases.

- Artificial Intelligence. Artificial Neural Systems, developed by SAIC for object classification, are being used to inspect luggage for explosives, to identify ships by their wakes, and to develop machine vision.

- Systems Development and Integration

 - Command and Control Systems. In early fiscal 1990, SAIC was named the systems engineer for the National Emergency Telecommunications System (NETS). Under a five-year contract awarded by Headquarters National Communication System, SAIC will help design and develop specifications for NETS, and provide program acquisition and support.

 - SAIC is developing a multimillion-dollar video teleconferencing system for the U.S. Naval Weapons Station at Seal Beach (CA).

 - Under a contract to the Naval War College in Newport (RI), SAIC provided a classified local area network for office automation throughout the college's War Gaming Department.

 - Software Engineering. Areas of focus include software reuse, CASE tools, and man/machine interfaces. SAIC is creating prototype development environments for IBM and Boeing as part of the Software Technology for Adaptable and Reliable Systems (STARS) program for military systems. SAIC is also developing software for a major U.S. Navy submarine combat control system upgrade known as CCS MKS.

 - Range Training Systems. SAIC continues to deliver hardware and software systems to upgrade training and exercise ranges on air, sea, and land for all three services of the Department of Defense.

 - Cruise Missile Support. SAIC continues to provide technical and integration analysis of missile systems and independent verification and validation of operational flight software for the U.S. Navy Tomahawk cruise missiles.

 - Flight Maintenance Systems. SAIC designed the B1-B Technical Support Center that integrates computers, data bases, and application software with video, facsimile, and

Copyright 1990 by INPUT. Reproduction Prohibited.

data communications to expedite the analysis and resolution of engineering problems between the field and the depot.

- Technical Support Services

 - Air Force Communications Support. SAIC has been awarded a five-year engineering support services contract with the Air Force Communications Command at Scott Air Force Base, Illinois.

 - Weapon Software Analysis. SAIC is evaluating the effectiveness of new software being developed for the Office of the Deputy Director for Research and Engineering, Test and Evaluation (ODDRE/T&E).

 - Training Systems. Under two support contracts, SAIC has assisted the U.S. Army Project Manager for Training Devices and the U.S. Navy Training Systems Center to develop and field various training devices and simulators.

 - Information System Design. Through two task-order contracts with the Federal Computer Performance Evaluation & Simulation Center, SAIC provides information systems design assessment and requirements determination services. During fiscal 1989, SAIC provided such services to the U.S. Army, Navy, Air Force, and Coast Guard.

Information services-related professional services provided by SAIC in the area of energy include the following:

- Systems Development and Integration

 - Plant Process Computer Upgrades. SAIC is replacing the single-plant process computer that monitors both Units 2 and 3 at the Peach Bottom Atomic Power Station with dedicated Plant Monitoring Systems for each unit.

 - Emergency Response Systems. During fiscal 1988, SAIC took over the installation of an emergency response computer system for the Prairie Island Nuclear Generating Plant and began upgrading the system.

 - Utility Replacement Systems. SAIC has designed a number of replacement systems for nuclear utility control and monitoring systems for clients such as Duke Power Company and Union Electric.

Copyright 1990 by INPUT. Reproduction Prohibited.

- Oil Pipeline Control Systems. SAIC received a new contract from the Arabian American Oil Company for a computerized central dispatch system that will coordinate the transportation of petroleum products throughout Saudi Arabia.

- Systems Engineering. SAIC provides a range of systems engineering services, including systems requirements analyses, trade-off studies, and system enhancement studies. For the Department of Energy's nuclear waste disposal program, SAIC software will correlate the relationships among high-level program issues and planned tests and studies.

In the area of Environment and Health, professional services provided by SAIC include the following:

- Military Medical Information Systems. In March 1988, SAIC was awarded a $1 billion, eight-year contract from the U.S. Department of Defense--the largest award in the company's 19-year history--to install the Composite Health Care System (CHCS), a computer-based medical information system, in more than 167 military hospitals and 583 clinics worldwide.

 - CHCS operates on DEC computers and any other processor with ANSI-standard MUMPS.

 - CHCS will automate patient administration, patient scheduling, laboratories, radiology, pharmacy, nursing, and clinical dietetics functions.

 - SAIC is subcontracting $400 million of the contract to DEC.

 - CHCS will eventually be installed at Army, Navy, and Air Force medical treatment facilities that handle 5.5 million in-patient visits per year and 52 million out-patient visits per year. The fully deployed system will use approximately 2,000 computers, 53,000 terminals, and 19,000 printers.

Contract examples in other areas include the following:

- SAIC is providing tools for independent validation and verification to help users of the National Aeronautics and Space Administration's Software Support Environment develop space station software.

- SAIC is assisting two computer manufacturers in developing guard systems for computer transaction security.

Copyright 1990 by INPUT. Reproduction Prohibited.

- For the Federal Bureau of Investigation, SAIC is providing a computer-based fingerprint comparison and identification system.

SAIC markets and supports various custom and standard products, including the following:

- For the Federal Aviation Administration, SAIC has developed two automated luggage inspection systems that can detect commercial and military explosives in checked luggage and air cargo.
- The Portable Imaging Computer, designed around an IBM PC-compatible computer, provides video image digitizing, image enhancement and storage, and data and word processing. It interfaces with a small, hand-held video camera, a portable video cassette recorder, a video printer, and a PC printer, and transfers video images or data via telephone lines.
- SAIC has built and installed automatic vehicle identification systems at toll crossings of the Lincoln Tunnel (New York) and the Coronado Bridge (San Diego).
- SAIC digital information management systems integrate document scanners, data compression and decompression methods, optical character recognition, software for image and text retrieval, and optical storage devices.
- SAICare is an integrated hospital information system that shares patient, scheduling, and administrative data.

Industry Markets

Approximately 88%, 91%, and 89% of fiscal 1990, 1989, and 1988, respectively, of SAIC's revenue was derived from prime contracts with the U.S. government or from subcontracts with other contractors engaged in work for the U.S. government.

The remainder of revenue was derived from commercial clients in manufacturing, energy technology, environment, health, and other industries.

Geographic Markets

Virtually all of SAIC's revenue is derived from sales to U.S. customers.

SAIC conducts its operations through offices and laboratory facilities located in over 30 states and the District of Columbia. Primary offices are located in Albuquerque (NM); Annapolis

Copyright 1990 by INPUT. Reproduction Prohibited.

(MD); Atlanta (GA); Boston (MA); Chicago (IL); Clearwater, Ft. Walton Beach, and Orlando (FL); Colorado Springs and Denver (CO); Dayton (OH); El Paso (TX); Huntsville (AL); Indianapolis (IN); Kailua (HI); Las Vegas (NV); Los Angeles, San Diego, San Francisco, Santa Barbara, and Santa Clara (CA); Newport (RI); New York (NY); Oak Ridge (TN); Omaha (NE); Pittsburgh (PA); Seattle (WA); Tucson (AZ); Virginia Beach (VA); and Washington, D.C.

Copyright 1990 by INPUT. Reproduction Prohibited.

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
10260 Campus Point Drive
San Diego, CA 92121
(619) 546-6000

J.R. Beyster, Chairman,
President, and CEO
Employee Owned
Total Employees: 8,665
Total Revenue, Fiscal Year End
1/31/88: $693,652,000
Information Services Revenue:
$180,000,000*

*INPUT estimate

The Company

Science Applications International Corporation (SAIC), founded in 1969 as Science Applications, Inc. offers diversified research and engineering services as its primary product, with the researchers and managers themselves owning the company. The company offers technical and professional services in the fields of national security, energy, and environment and health. SAIC is also involved in the custom assembly of special-purpose computer systems and the manufacture of certain high technology products.

Because SAI believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company, either by direct purchase or through several stock option plans. At the close of fiscal 1988, more than 44% of all employees owned stock directly, with additional employees holding shares in retirement plans. Since the stock is not publicly traded, liquidity is provided by the internal market operated four times a year by Bull, Inc., a wholly owned broker-dealer subsidiary.

Total fiscal 1988 revenue reached $693.7 million, a 16% increase over fiscal 1987 revenue of $599.7 million. Net income rose 20%, from $18 million in fiscal 1987 to nearly $21.6 million in fiscal 1988. A five-year financial summary follows:

Copyright 1988 by INPUT. Reproduction Prohibited.

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	1/88	1/87	1/86	1/85	1/84
Revenue	$693,652	$599,663	$532,717	$420,297	$354,366
• Percent increase from previous year	16%	13%	27%	19%	22%
Income before taxes	$38,986	$35,506	$29,643	$26,619	$24,803
• Percent increase from previous year	%	20%	11%	7%	5%
Net income	$21,587	$18,047	$16,020	$14,736	$13,255
• Percent increase from previous year	20%	13%	9%	11%	9%
Earnings per share (a)	$0.48	$0.41	$0.37	$0.34	$0.32
• Percent increase from previous year	17%	11%	9%	6%	3%

(a) Restated to reflect a 5-for-1 Class A common stock split in August 1987. SAIC initiated the stock split in order to make the price of its stock more affordable to more employees.

As shown below, the company's growth is directly related to receipt of contract awards and contract performance:

SAIC
CONTRACT ACTIVITY

	FISCAL YEAR		
NUMBER OF CONTRACTS	1/88	1/87	1/86
Awarded	2,980	2,285	2,045
Completed	1,783	1,937	1,763
In process at year end	3,686	2,489	2,141

The average value per contract awarded was $256,000 in fiscal 1988, compared to $245,000 in fiscal 1987, and $265,000 in fiscal 1986.

Copyright 1988 by INPUT. Reproduction Prohibited.

The company currently has 25 active contracts with individual values over $10 million and 27 active contracts with individual values between $5 million and $10 million.

SAIC classifies its business into two segments as follows:

- Technical Services, which relate to National Security and to Energy, Environment, and Health include:
 - The design, development, and analysis related to defense policies, high-technology research, computer software and systems, tactical and strategic operations systems for military organizations, support, and manpower training programs.
 - Research, analysis, engineering, and technical services and software and systems for government agencies and industrial customers related to nuclear energy, alternative energy sources, and a range of environmental studies, as well as health and human development programs.
- Products and other includes production of custom designed and standard products, such as data display devices, sensors and prototype instruments under contract for government agencies and industrial customers. These products incorporate SAIC-developed hardware and hardware manufactured by others.

A three-year summary of source of revenue by business segment follows:

Copyright 1988 by INPUT. Reproduction Prohibited.

SAIC
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1/88		1/87		1/86	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Technical Services						
- National Security	$445.5	64%	$405.2	68%	$361.7	68%
- Energy, Environment, and Health	187.3	27%	147.2	25%	132.1	25%
Products and other	57.8	8%	44.9	7%	35.4	7%
Interest income	3.1	--	2.3	--	3.5	--
TOTAL	**$693.7**	**100%**	**$599.7**	**100%**	**$532.7**	**100%**

SAIC's information services revenue reached an estimated $180 million in fiscal 1988, compared to an estimated $159 million for fiscal 1987.

During fiscal 1988 SAIC made several acquisitions, including: American Systems Engineering Corporation (Norfolk, VA), an engineering and ship maintenance firm; AMEX Systems Inc. (San Diego, CA), a manufacturer of military training range systems and equipment; Systems Engineering and Analysis Company (Kailua, HA), a specialist in deep ocean equipment, ship development, acoustic research, and fiber-optic systems; and Pacifica Technologies, with experience in nuclear testing, armor/antiarmor development, and nuclear explosion effects.

SAIC subsidiaries include:

- American Systems Engineering Corporation.
- AMEX Systems, Inc.
- Bull, Inc.
- Carl T. Jones Corporation.
- La Jolla Research & Business Associates, Inc.
- SAIC Architects, Inc.

Copyright 1988 by INPUT. Reproduction Prohibited.

- SAIC (Canada).
- SAIC (Virgin Islands).

As of January 31, 1988, SAIC had 8,665 employees. A breakdown of the professional staff by academic degree follows:

Sciences	45%
Engineering	25%
Business/Economics/Law	16%
Humanities/Social Sciences	14%
	100%

SAIC competitiors for information services-related contracts include Computer Sciences Corporation and Planning Research Corporation.

Key Products and Services

INPUT estimates approximately 50% of SAIC's $180 million in information services revenue was derived from professional services (including customized systems development and consulting), 40% from systems integration, and the remaining 10% from processing services and software product sales.

Services are provided by SAIC in the areas of National Security, Energy, and Environment and Health, and are categorized as involving technology development and analysis, systems development and integration, and technical support services activities.

In the area of National Security, examples of professional services provided by SAIC include the following:

- Technology Development and Analysis.
 - Strategic Defense Initiative (SDI). SAIC built the Strategic Defense Simulation Laboratory, an advanced facility for simulating the management of the SDI battle. SAIC is assisting both the U.S. Army and the Air Force to develop and test survivability systems, providing survivable technology development, survivability validation, and analyses and evaluations for concepts, feasibility, trade-offs, risks, and cost-effectiveness.
 - Theater Missile Defense Architecture. SAIC is the senior subcontractor of a team headed by Messerschmitt-Boelkow-Blohm GmbH that is developing a Theatre Missile Defense

Copyright 1988 by INPUT. Reproduction Prohibited.

Architecture for Europe for the U.S. Army Strategic Defense Command.

- Surveillance/Electro-Optics Technology. In the area of SDI optical sensors, SAIC has joined with several teams to provide technology and subsystems, such as the Space Surveillance & Tracking System (teamed with TRW), the Boost and Ground Surveillance & Tracking Systems (teamed with Lockheed), and Starlab (teamed with Lockheed). SAIC is also providing software development, threat analysis, survivability engineering, system performance evaluation, and is helping design an onboard payload processing capability using SAIC-developed Ada software for the requirements definition.

- Battle Management/C^3. For the U.S. Army, SAIC is helping build an experimental Battle Management/Command, Control and Communications system to answer questions associated with BM/C^3. SAIC is formulating threat-related BM/C^3 algorithms and developing computer simulations to analyze algorithm performance in a tactical environment.

- Automated Nuclear Force Planning. SAIC developed an automated capability for nuclear force planning and was selected by the Defense Nuclear Agency to develop a modern, fully automated nuclear force planning system for the Supreme Headquarters, Allied Powers Europe.

- Army Model Development/Evaluation. SAIC is developing new models and assessing existing models for the U.S. Army Intelligence & Threat Analysis Center. SAIC recently developed automated flow-charting and flow-analysis tools to analyze large Army models written in SIMSCRIPT. The company is also developing a simulation that can be used by the center to assess tactical battle management.

- Submarine/Anitsubmarine Warfare. For the sixteenth consecutive year, SAIC has provided hardware and software support to critical submarine and antisubmarine warfare programs, including technical and analytical support for both strategic and attack submarine programs, such as the U.S. Navy's future attack submarine the SSN-21 (SEAWOLF) class.

- Nuclear Weapons Effects. Since its inception, SAIC has been involved in nuclear weapons effects. Under contract to the U.S. Army's Harry Diamond Laboratories, SAIC is providing a range of scientific and technical support services,

Copyright 1988 by INPUT. Reproduction Prohibited.

from the analysis, modeling, and testing of nuclear weapons effects on military systems, to the development of equipment, materials, tools, standards, computer codes, and specifications.

- Seismic Analysis. For the Defense Advanced Research Projects Agency, SAIC's Center for Seismic Studies is supporting the U.S. capability to verify test ban treaties. the company is also developing an expert system that will apply artificial intelligence technology to the seismic analysis methods required for test ban treaty monitoring.

- Center for Target Studies. SAIC's Center for Target and Geographic Studies offers support for target characterization and targeting analysis, and a collection of map, target, and terrain data bases.

- Ada Technology. SAIC is a contributor to the Department of Defense's Ada Software Technology for Adaptable and Reliable Systems (STARS) programs. The company is developing five STARS tools, including the Standard Generalized Markup Language Processor.

- Artificial Intelligence. Artificial Neural Systems, developed by SAIC for object classification, are being used to inspect luggage for explosives, to identify ships by their wakes, and to develop machine vision.

• Systems Development and Integration.

- Command and Control Systems. In 1987 SAIC was named system engineering and technical support contractor for the Pacific Air Force (PACAF) Constant Watch Program. SAIC is supporting architecture definition, configuration management, display and data system upgrades, facility upgrades, and program control for the facilities and information decision support systems at PACAF Command Centers in Hawaii, Japan, Korea, and the Phillippines. As part of a continuing contract for the Commander in Chief/Atlantic, SAIC is designing a modernized command center for NATO naval forces in Iceland. For the U.S. European Command, the company is designing, integrating, and testing the Alternative Support Headquarters, a program that involves tasks in the areas of communications, secure communications, closed circuit television, and intrusion detection. SAIC is also supporting the development and installation of the Command Control Information System

Copyright 1988 by INPUT. Reproduction Prohibited.

(CCIS) for the U.S. Central Command and designed an office automation system that operates with CCIS.

- Aircraft Training Simulators. SAIC has developed dual-purpose B-1B simulators for the U.S. Air Force that are being used for training and to evaluate proposed modifications to the aircraft and aircrew man-machine interface.

- PATRIOT Tactical Operations Simulator. This simulator was developed by SAIC to implement, verify, and validate tactical software for the PATRIOT Air Defense System.

- Range Training Systems. SAIC continues to develop and deliver test and training systems and systems support for all three services of the Department of Defense. These systems include Army training ranges capable of tracking over 500 participants, Air Force systems capable of tracking 40 aircraft simultaneously, and Navy systems capable of tracking 60 ships and aircraft. In the area of ground-based ranges, SAIC is integrating digital, audio, and video technologies into the training system for the U.S. Army's National Training Center at Fort Irwin.

- Automated Munitions Proving. SAIC is the systems integrator for four automated munitions proving systems for the U.S. Army Jefferson Proving Grounds. SAIC is developing the software and hardware necessary to integrate commmercial-off-the-shelf equipment, as well as maintaining the systems.

- Cruise Missile Support. SAIC was awarded a multi-year contract for technical and integration analysis of missile systems and independent verification and validation of operational flight software for the U.S. Navy Tomahawk cruise missiles.

- Image Exploitation Systems. SAIC is using its expertise in digital imagery, artificial intelligence, human factor analysis, and digital cartograpy to produce hardware and software products for automatic image exploitation. One of its largest projects is for the Defense Advanced Research Projects Agency.

- B1-B Technical Support Center. SAIC developed this center for the Oklahoma City Air Logistics Center to expedite the analysis and resolution of engineering problems between the field and the depot. The system provides rapid

Copyright 1988 by INPUT. Reproduction Prohibited.

communication of digital, video, and facsimile information, access to multiple systems, and support for remote engineering analysis.

- Technical Support Services.

 - During fiscal 1988 SAIC was selected to be a key contractor for the Sacramento Air Logistics Center's Competition Engineering Program, a plan to moderize existing aircraft, communications, and electronics systems.

 - Metrology Engineering Services. SAIC has provided failure analysis and troubleshooting for U.S. Navy communications systems for nearly ten years. SAIC also provides data base maintenance for the Navy's inventory of test measurement and diagnostic equipment.

 - Training Systems. Under two support contracts, SAIC has assisted the U.S. Army Project Manager for Training Devices and the U.S. Navy Training Systems Center to develop and field various training devices and simulators.

 - Ada Software Engineering. SAIC continues to integrated Ada and relational data base technology into government and commercial systems. The company will be fielding the first operational Worldwide Military Command and Control System in Ada this year. SAIC also developed the Automated Message Handler for the Joint Intelligence Tactical Communications System using Ada.

 - Information System Design. Through two task-order contracts with the Federal Computer Performance Evaluation & Simulation Center, SAIC provides information systems design assessment and requirements determination services to federal government agencies. During fiscal 1988, SAIC provided such services to the U.S. Coast Guard and the Naval Supply System Command. The company is currently analyzing requirements for the U.S. Army Space Agency to assume operational responsibility for the Defense Space Communication System. SAIC is also developing the configuration for an upgraded computer network to support intelligence gathering for the U.S. Air Force.

 - C^3 Support. For the Strategic Air Command, SAIC provides strategic war-planning system software and systems engineering. SAIC also provides technical support for command, control, and communications systems.

Copyright 1988 by INPUT. Reproduction Prohibited.

Information services-related professional services provided by SAIC in the area of energy include the following:

- Systems Development and Integration.

 - Plant Process Computer Upgrades. SAIC is replacing the single plant process computer that monitors both Units 2 and 3 at the Peach Bottom Atomic Power Station with dedicated Plant Monitoring Systems for each unit. SAIC has completed installation and acceptance of a plant process computer and Safety Assessment System at the Ginna Station Nuclear Power Plant and has been awarded a contract to develop and install similar systems for Ginna's Operator Training Facility.

 - Emergency Response Systems. During fiscal 1988, SAIC took over the installation of an emergency response computer system for the Prairie Island Nuclear Generating Plant and began upgrading the system.

 - Utility Replacement Systems. SAIC has designed a number of replacement systems for nuclear utility control and monitoring systems for clients such as Duke Power Company and Union Electric.

 - Oil Pipeline Control Systems. SAIC received a new contract from the Arabian American Oil Company for a computerized central dispatch system that will coordinate the transportation of petroleum products throughout Saudi Arabia.

 - Systems Engineering. SAIC provides a range of systems engineering services, including systems requirements analyses, trade-off studies, and system enhancement studies. For the Department of Energy's nuclear waste disposal program, SAIC software will correlate the relationships among high-level program issues and planned tests and studies.

In the area of Environment and Health, professional services provided by SAIC include the following:

- Military Medical Information Systems. In March 1988 SAIC was awarded a $1 billion, eight-year contract from the U.S. Department of Defense, the largest award in the company's 19-year history, to install the Composite Health Care System (CHCS), a computer-based medical information system, in more than 167 military hospitals and 583 clinics worldwide.

Copyright 1988 by INPUT. Reproduction Prohibited.

- CHCS operates on DEC computers and any other processor with ANSI-standard MUMPS.

- CHCS will automate patient administration, patient scheduling, laboratories, radiology, pharmacy, nursing, and clinical dietetics functions.

- SAIC is subcontracting $400 million of the contract to DEC.

- CHCS will eventually be installed at Army, Navy, and Air Force medical treatment facilities that handle 5.5 million in-patient visits per year and 52 million out-patient visits per year. The fully deployed system will use approximately 2,000 computers, 53,000 terminals, and 19,000 printers.

Contract examples in other areas include the following:

- SAIC has developed mainframe systems software for commercial customers in the areas of data storage management, system backup and recovery, and application migration tools. The company has also performed several major system software documentation projects.

- SAIC is providing tools for independent validation and verification to help users of the National Aeronautics and Space Administration's Software Support Environment develop Space Station software.

- SAIC is assisting two computer manufacturers in developing guard systems for computer transaction security. For the Federal Bureau of Investigation, SAIC is providing a computer-based fingerprint comparison and identification system.

SAIC markets and supports various custom and stardard products, including the following:

- For the Federal Aviation Administration, SAIC has developed two automated luggage inspection systems that can detect commercial and military explosives in checked luggage and air cargo.

- The Portable Imaging Computer, designed around an IBM PC-compatible computer, provides video image digitizing, image enhancement and storage, and data and word processing. It interfaces with a small, hand-held video camera, a prtable video cassette recorder, a video printer, and a PC printer, and transfers video images or data via telephone lines.

Copyright 1988 by INPUT. Reproduction Prohibited.

- SAIC is developing a flight data recorder software support system for the U.S. Army Safety Center. When used with a 460-channel digital flight recorder, it will allow replay of an aircraft mishap, using flight simulator equipment.

- SAIC digital information management systems integrate document scanners, data compression and decompression methods, optical character recognition, software for image and text retrieval, and optical storage devices.

- SAICare is an integrated hospital information system that shares patient, scheduling and administrative data.

Industry Markets

Approximately 89%, 89%, and 87% of fiscal 1988, 1987, and 1986, respectively, of SAIC's revenue was derived from prime contracts with the U.S. government or from subcontracts with other contractors engaged in work for the U.S. government.

- A C^3 contract awarded through the U.S. Navy to a foreign navy generated $75 million (13% of total revenue) in fiscal 1987, and $100 million (19% of total revenue) in fiscal 1986. In 1987, installation and turnover of the system was completed. Continuing activities on this contract include field operation, maintenance, and system software support.

The remainder of revenue was derived from commercial clients in manufacturing, energy technology, environment and health, other industries.

Geographic Markets

Virtually all of SAIC's revenue is derived from sales to U.S. customers.

- The U.S. Navy Foreign Military Sales contract, previously described, accounted for 13% and 19% of total revenue for fiscal 1987 and 1986, respectively.

- Foreign operations and revenue directly attributed to foreign customers are not material.

SAIC conducts its operations through offices and laboratory facilities located in over 30 states and the District of Columbia. Primary offices are located in Albuquerque, Atlanta, Boston, Chicago, Colorado Springs, Dayton, Denver, El Paso, Huntsville, Kailua, Las Vegas, Los Angeles, Newport, Norfolk, Oak Ridge, Omaha, Orlando, San Diego, San Francisco, Santa Barbara, Seattle, Tucson, and Washington, D.C.

Copyright 1988 by INPUT. Reproduction Prohibited.

SCIENCE APPLICATIONS
INTERNATIONAL CORPORATION
1200 Prospect Street
La Jolla, CA 92037
(619) 454-3811

J. R. Beyster, President and Chairman
Employee Owned
Total Employees: 6,139
Total Revenue, Fiscal Year End
1/31/86: $532,717,000
Computer Services Revenue:
$167,806,000

THE COMPANY

- Science Applications International Corporation (SAIC), founded in 1969 as Science Applications, Inc., offers diversified research and engineering services as its primary product, with the researchers and managers themselves owning the company. Historically, the company has offered technical services in the fields of applied science, military software development and application, and military systems. The company has expanded significantly into the areas of energy, environment, and health. SAIC also engages in the custom assembly of special-purpose computer systems and the manufacture of certain high technology products.

- Because SAI believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company. As a result, at the close of fiscal 1986, approximately 84% of all employees held company stock, either directly or through one of the company's employee benefit plans. Shares not held by employees are almost entirely owned by consultants or former employees. Since the stock is not publicly traded, SAI develops a limited secondary market through Bull, Inc., a wholly owned broker-dealer subsidiary.

- Fiscal 1986 revenue reached $532.7 million, a 27% increase over fiscal 1985 revenue of $420.3 million. Net income rose 9%, from $14.7 million in fiscal 1985 to $16 million in fiscal 1986. A five-year financial summary follows:

©1986 by INPUT. Reproduction Prohibited.

SAIC
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1/86	1/85	1/84	1/83	1/82
Revenue	$532,717	$420,297	$354,366	$290,260	$238,474
. Percent increase from previous year	27%	19%	22%	22%	27%
Income before taxes	$ 29,643	$ 26,619	$ 24,803	$ 23,722	$ 12,419
. Percent increase from previous year	11%	7%	5%	91%	44%
Net income	$ 16,020	$ 14,736	$ 13,255	$ 12,193	$ 6,559
. Percent increase from previous year	9%	11%	9%	86%	41%
Earnings per share	$ 1.83	$ 1.70	$ 1.58	$ 1.55	$ 0.87
. Percent increase from previous year	8%	8%	2%	78%	34%

- As shown below, the company's growth is directly related to receipt of contract awards and contract performance:

	1/86	1/85	1/84
Number of Contracts			
Awarded	2,045	1,985	1,288
Completed	1,763	1,595	1,430
In Process at Year-End	2,141	1,859	1,469

- The average value per contract awarded was $265,000 in fiscal 1986, $227,000 in fiscal 1985, and $202,000 in fiscal 1984.

- SAIC classifies its business into two segments as follows:

 - Technical Services, which relate to National Security and to Energy, Environment, and Health, include:

 . Design, development, and analysis related to defense policies, high-technology research, computer software and systems, tactical and strategic operations systems for military organizations, and manpower training programs.

 . Research analysis and engineering, and technical services for government agencies and industrial customers related to nuclear energy, alternative energy sources, oil and gas recovery from

©1986 by INPUT. Reproduction Prohibited.

mineral resources, and a range of environmental studies as well as health and human development programs.

- Products and Other includes production of custom designed and standard products, such as data display devices, sensors, and prototype instruments, under contract for government agencies and industrial customers. These products incorporate SAIC-developed hardware and hardware manufactured by others.

- A three-year summary of source of revenue by business segment follows:

SAIC
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ thousands)

ITEM \ FISCAL YEAR	1/86	1/85	1/84
Technical Services			
. National Security	$361,681	$277,752	$223,069
. Energy, Environment, and Health	132,079	101,530	89,279
Products and Other	35,444	36,148	38,502
Interest Income	3,513	4,867	3,516
Total	$532,717	$420,297	$354,366

- SAIC's computer services revenue reached an estimated $168 million in fiscal 1986, compared to revised estimates of $126 million in fiscal 1985.

- SAIC's current organization structure is shown in the exhibit.

- SAIC subsidiaries include

 - Bull, Inc.
 - Carl T. Jones Corporation.
 - La Jolla Research & Business Associates, Inc.
 - SAIC Architects, Inc.
 - SAIC (Canada).
 - SAIC (Virgin Islands).
 - SAIC Ltd. (England).

©1986 by INPUT. Reproduction Prohibited.

EXHIBIT

SAIC
EXECUTIVE MANAGEMENT

© 1986 by INPUT. Reproduction Prohibited.

- As of January 31, 1986, SAIC had 6,139 full-time employees. A breakdown of the professional personnel by academic degree follows:

Sciences	44%
Engineering	24
Business/Economics/Law	18
Humanities/Social Sciences	14
	100%

 - The company currently has 7,159 employees.

- SAIC competitors for EDP-related contracts include Computer Sciences Corporation and Planning Research Corporation.

KEY PRODUCTS AND SERVICES

- Approximately 80% of SAIC's $168 million in computer services revenue was derived from professional services. The remaining 20% was derived from standalone graphics workstations and software product sales.

- Professional services are provided by SAIC in the areas of National Security, Energy, and Environment and Health and are categorized as involving technology development and analysis, support services, and system integration activities.

- In the area of National Security, services provided by SAIC include the following:

 - Technology Development and Analysis.

 . Strategic Defense Initiative (SDI). As one of the winners of the Phase II System Architecture and Trade Study, SAIC is involved in the ongoing research program to study the feasibility of a multilayered strategic defense system. SAIC is serving as the prime contractor on the Probe Utility Study and as SETA contractor on the SDI kinetic energy weapon program at Eglin Air Force Base. SAIC is also involved in the concept definition of surveillance systems and command, control, and communication networks.

 . Policy Analysis. SAIC's Foreign Systems Research Center, which specializes in in-depth research on Soviet military capabilities, won a wide-ranging new contract with the U.S. Air Force Space Command to provide for strategic planning and policy formulation for the next 5 to 25 years. SAIC continues to support the Defense Nuclear Agency, the Office of the Secretary of Defense, and the U.S. Pacific Command with analyses of military doctrine in the Asia-Pacific region.

©1986 by INPUT. Reproduction Prohibited.

- Communications. SAIC has recently completed a communications study for the Naval Space and Warfare Systems Command that will be used to implement improvements in fleet communications for the U.S. Navy.

- Ada. SAIC is responsible for the verification and validation of the development of the U.S. Navy's Ada language system. For the Department of Defense, SAIC has also completed the first Ada version of the Unit Status and Identity Report for the Worldwide Military Command and Control System, as well as the first Ada interfaces to major data base systems such as Oracle and Ingres.

- Electronic Warfare. The company continues to provide systems development support to the electronic warfare and intelligence communities through its Electronic Combat Laboratory.

- Robotics. SAIC was chosen to lead an effort, sponsored by the Defense Nuclear Agency, to formulate design and operational concepts for advanced technology physical security systems that could reduce manpower requirements at weapons storage sites. This effort is focused on a wide range of technologies, including advanced sensors, expert systems, and non-lethal weapons.

- Seismic Research. SAIC has recently been awarded the operation and maintenance contract for the Defense Advanced Research Projects Agency's Center for Seismic Studies. This is in addition to a continuing contract to manage research directed at improving U.S. capabilities to monitor nuclear test ban treaties.

- Artificial Intelligence. SAIC has expertise in the areas of artificial intelligence, decision aids, and expert systems. One example is the real-time expert system developed to automate a pilot's high-level cognitive processes during combat. SAIC has also developed the Airborne Early Warning Real-time Advisory System, which uses artificial intelligence and expert systems for improved ocean surveillance in anti-submarine warfare.

- Training. The Realistic Air Defense Engagement System (RADES), developed by SAIC for the Army Research Institute, is being expanded under a new five-year contract. In addition, RADES will support the Joint Forward Area Air Defense Effort.

- Systems Development and Integration.

 - Command, Control, Communications, and Intelligence (C^3I) Systems. SAIC was awarded a turnkey contract involving communications, secure communications, closed circuit TV, and intrusion detection for the European Command's Underground

©1986 by INPUT. Reproduction Prohibited.

Alternate Support Headquarters. SAIC also completed installation of a command, control, and communications system for the naval forces of a foreign navy, and is supplying Eidophor display projectors for a major new C^3 system. In another important project, the Joint Forward Area Air Defense program, SAIC will manufacture hardware components for the weapon system and command post simulations and will also design and test Ada-based software that will simulate battlefield conditions. In other C^3I projects, SAIC provided systems and software engineering support to the Strategic Air Command for the development of the Strategic War Planning System.

- Military Logistics. SAIC won a number of contracts in the past year which will result in modernized logistics support for the U.S. Air Force Air Logistics Centers. For one contract focusing on hardware and software development for the B-1B Strategic Bomber Technical Support Center, SAIC is developing a system incorporating mobile video equipment to transmit pictures of damaged aircraft back to the air logistic center. A separate project involves development of a maintenance decision support system. In a project for the U.S. Navy, SAIC developed the Local Asset Management System, a microcomputer-based system that allows users to allocate scarce equipment.

- Training Systems. SAIC continued its work in the development of the Multiple Object Location System, a troop training device which enhances safety and provides feedback to personnel during live-fire training exercises. In addition, SAIC supported the U.S. Army's simulation and training technology program with instructional systems development, computer-aided instruction, human factors evaluation, and integrated logistics support. SAIC also continued to develop new capabilities and provide maintenance support for the Patriot Tactical Operations Simulator, which is now being used for support of the Identification Friend, Foe, Neutral project, a NATO aircraft identification system involving U.S. Army and Air Force systems. In a separate project, SAIC was selected to participate in the full-scale engineering development of the On-Board Electronic Warfare Simulator, which provides enhanced electronic combat training to aircrews.

- Aircraft Training Simulators. SAIC's continued efforts in support of the multimillion dollar Strategic Avionics Design Evaluation Facility includes a full spectrum of research and simulator development and integration efforts relevant to strategic avionics systems. The company has modified existing B-52 crewstation simulators to reflect changes in avionics and has completed the development of the first of two B-1B Engineering Research Simulators, the only ground-based simulator available to train B-1B crews.

©1986 by INPUT. Reproduction Prohibited.

 - Space Defense Command and Control. SAIC is completing the testing and validation of an Owner/Operator Communications System that allows the Space Defense Operations Center to communicate with space system ground facilities worldwide. This system was established simultaneously with upgrades to control centers and modifications to hardware and software used for the interface.

 - Information Systems. The company was awarded a five-year contract to provide formulation, design, development, implementation, and maintenance of the Command and Control Computer Network and all other automated data processing systems within U.S. Central Command, a major new Unified Command.

 - Image Exploitation. SAIC continued its role as system integrator for the Advanced Digital Radar Imagery Exploitation System under development for the Defense Advanced Research Projects Agency. This system, as part of DARPA's Strategic Computer Program, applied the latest advances in artificial intelligence and knowledge-based systems to automatic image exploitation.

- Technical Support Services.

 - Training and Field Support. After completing the development and installation of a command, control, and communications system for the naval forces of a U.S. ally, SAIC began installing a software support center and providing operations, maintenance, training, and field support.

 - Training Devices. SAIC won the recompetition of the U.S. Army Training Devices (PM Trade) engineering support service and technical support and readiness contracts. SAIC has recently dedicated a new facility in Orlando (FL) to support this and other local contracts.

 - Computer Systems Testing. SAIC performed test planning, administered various tests, and analyzed results for the U.S. Navy's Integrated Combat Systems Test Facility, which is responsible for evaluating tactical data systems and antisubmarine warfare control systems prior to their installation on naval ships.

- Computer-related professional services provided by SAIC in the area of energy include the following:

©1986 by INPUT. Reproduction Prohibited.

- Systems Development and Integration.

 - Plant Process Computers. In two related projects, SAIC is correcting and completing the work of contractors whose performance led to the termination of their contracts. For example, at Rochester Gas & Electric Company in New York, we are supporting efforts to meet the Nuclear Regulatory Commission's requirements for an Emergency Response System and a Plant Process Computer Upgrade of their existing computer system. Similar work is being performed for Northern States Power at their Prairie Island facility in Minnesota.

 - Computer System Design/Pipeline Control. SAIC is designing and upgrading computer systems to provide real-time monitoring and control functions to support the Arabian American Oil Company's oil production and dispatching facilities in Saudi Arabia.

 - Plant Instrumentation Upgrades. In cooperation with the Electric Power Research Institute and Northern States Power, SAIC has developed a digital feedwater control system for installation at the Monticello Nuclear Power Plant in Minnesota.

 - Utility Replacement Systems. SAIC has designed a number of replacement systems for nuclear utility control and monitoring systems. For example, microcomputer-based systems designed by SAIC have replaced existing nuclear fuel rod position indicator, rod worth minimizer, and traversing incore probe systems at several power plants.

- Technical Support Services.

 - Information Management. As part of the National Public Presentation Programs, SAIC is developing and implementing information management services for the Department of Energy. In addition, SAIC operates the American Museum of Science and Energy for the Department of Energy.

 - Risk Assessment. For the Electric Power Research Institute, the company is currently developing software to assist plant operators in decision-making regarding maintenance and repair of components. SAIC has also developed a series of fault-tree and event-tree analysis computer codes for use on microcomputers.

- Systems development and integration services are also provided by SAIC in other application areas as follows:

 - Advanced Remote Recognition/Tracking. A new system under development by SAIC uses surface acoustic wave technology for a wide

©1986 by INPUT. Reproduction Prohibited.

range of potential applications, including personnel monitoring and access control, inventory management, intermodal container tracking, truck and auto fleet management, and train control systems management.

- Law Enforcement. Under contract to the Federal Bureau of Investigation, SAIC continued its work in the design, development, and installation of an advanced technology computer-based system that will compare a subject's fingerprints against the FBI's extensive fingerprint files.

- During fiscal 1986, 1985, and 1984, approximately two-thirds of contract revenue was derived from cost-reimbursement contracts and the balance from fixed-price and time-and-material contracts. In general, the contracts range in length from approximately one month to 48 months; the majority are for one year or less.

- SAIC markets and supports the following products:

 - TOPS™-200, SAIC's standalone graphics workstation, is being used for missile dispersal analysis for the Hardened Mobile Launcher, for military crisis action planning, and in the Joint Forward Area Air Defense testbed.

 - The Integrated Software Management System for maintenance of complex military systems is being used by the U.S. Air Force to help maintain the Air Launched Cruise Missile flight software, the B-52 onboard avionics software, and electronic warfare software.

INDUSTRY MARKETS

- Approximately 87%, 87%, and 86% of fiscal 1986, 1985, and 1984, respectively, of SAIC's contract revenue was derived from prime contracts with the U.S. government or from subcontractors with other contractors engaged in work for the U.S. government.

 - A C^3 contract awarded through the U.S. Navy to a foreign navy generated $100 million in revenue during fiscal 1986 and $72 million in revenue during both fiscal 1985 and 1984. It is anticipated that that contract will be substantially completed in 1987.

 - The remaining 13%, 13%, and 14% of revenue for fiscal 1986, 1985, and 1984, respectively, was derived from commercial clients in manufacturing, energy technology, environment and health, and other industries.

GEOGRAPHIC MARKETS

- Virtually all of SAIC's revenue is derived from sales to U.S. customers.

©1986 by INPUT. Reproduction Prohibited.

- SAIC has a cost reimbursement, Foreign Military Sales contract with the U.S. Navy which accounted for 19%, 17%, and 20% of consolidated revenue for fiscal 1986, 1985, and 1984, respectively.

- Foreign operations and revenue directly attributable to foreign customers are not material.

- SAIC conducts its operations through offices and laboratory facilities located in 28 states and the District of Columbia. Primary offices are located in Albuquerque, Atlanta, Boston, Chicago, Colorado Springs, Dayton, Denver, El Paso, Huntsville, Las Vegas, Los Angeles, Norfolk, Oak Ridge, Omaha, Orlando, San Diego, San Francisco, Santa Barbara, Tucson, and Washington, D.C.

COMPUTER HARDWARE

- SAIC has DEC, IBM, and Gould computers installed at its various offices nationwide.

©1986 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO PROFILE DATED OCTOBER 1982*

SCIENCE APPLICATIONS
INTERNATIONAL CORPORATION
1200 Prospect Street
La Jolla, CA 92037
(619) 454-3811

J. R. Beyster, President and Chairman
Public Corporation, Employee Owned
Total Employees: 5,500
Total Revenue, Fiscal Year End
1/31/85: $420,297,000
Computer Services Revenue:
$250 Million**

THE COMPANY

- In August 1984 Science Applications, Inc. (SAI) was merged into its parent holding company, Science Applications International Corporation (SAIC). As a result of this reorganization, all business and operations of SAI are now conducted directly by SAIC and all officers and employees of SAI have become officers and employees of SAIC.

SAIC
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1/85	1/84	1/83	1/82	1/81
Revenue	$ 420,297	$ 354,366	$ 290,260	$ 238,474	$ 187,290
. Percent increase from previous year	19%	22%	22%	27%	24%
Income before taxes	$ 26,619	$ 24,803	$ 23,722	$ 12,419	$ 8,625
. Percent increase from previous year	7%	5%	91%	44%	40%
Net income	$ 14,736	$ 13,255	$ 12,193	$ 6,559	$ 4,641
. Percent increase from previous year	11%	9%	86%	41%	38%
Earnings per common share	$ 1.70	$ 1.58	$ 1.55	$ 0.87	$ 0.65
. Percent increase from previous year	8%	2%	78%	34%	30%

SOURCE OF REVENUE

- One hundred percent of SAIC's computer services revenue was derived from professional services. SAIC's estimated $250 million in computer services

* Replaces Financial Update of August 1984
** Company estimate

©1985 by INPUT. Reproduction Prohibited.

revenue is about equally divided between systems and application software development and the designing of customized integrated systems. The majority of the company's revenue (87%) is derived from U.S. government contracts.

- SAIC management attributes the dramatic increase in computer services revenue as a percent of total revenue to a corporate shift in emphasis to providing systems integration services.

- As shown below, the company's growth is directly related to receipt of contract awards and contract performance:

	1/85	1/84	1/83
Number of Contracts			
Awarded	1,985	1,288	1,398
Completed	1,646	1,430	1,635
In Process at Year-End	1,808	1,469	1,611

- The average value per contract awarded was $227,000 in 1985, $202,000 in 1984, and $266,000 in 1983.

NEW PRODUCTS AND SERVICES

- SAIC has contracted to provide a turnkey system for automated fingerprint identification to the Federal Bureau of Investigation (FBI). SAIC will design, develop, and select equipment; and will provide facility modification, system integration and testing, training, software development, and maintenance.

- During fiscal 1985 SAIC developed a variety of software for advanced applications.

 - National security-related software includes:

 . An electro-optical fire control system.
 . A ship tracking system.
 . A tactical data system for antisubmarine warfare.
 . The Cost Data Management System, an interactive documentation tool for estimating aircraft simulator costs.

 - Energy-related software developments include:

 . Plant process software that permits nuclear utilities to integrate the analyses of plant operations data with data required to monitor other functions in an emergency.

©1985 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO HIGHLIGHT DATED OCTOBER 1982

SCIENCE APPLICATIONS, INC.
1200 Prospect Street
La Jolla, CA 92037
(619) 454-3811

J. R. Beyster, President and Chairman
Subsidiary of Science Applications International Corporation
Total Employees: 4,750
Total Revenue, Fiscal Year End 1/31/84: $354,366,000
Computer Services Revenue: $75 million*

SAI
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

FISCAL YEAR / ITEM	1/84	1/83	1/82	1/81	1/80
Revenue	$ 354,366	$ 290,260	$ 238,474	$ 187,290	$ 150,894
. Percent increase from previous year	22%	22%	27%	24%	37%
Income before taxes	$ 24,803	$ 23,722	$ 12,419	$ 8,625	$ 6,177
. Percent increase from previous year	5%	91%	44%	40%	40%
Net income	$ 13,255	$ 12,193	$ 6,559	$ 4,641	$ 3,353
. Percent increase from previous year	9%	86%	41%	38%	42%
Earnings per common share	$ 1.58	$ 1.55	$ 0.87	$ 0.65	$ 0.50
. Percent increase from previous year	2%	78%	34%	30%	28%

SOURCE OF REVENUE

- SAI's $75 million in computer services revenue is about equally divided between professional services systems and application software development and the designing of customized integrated systems. The majority of the company's revenue (86%) is derived from U.S. government contracts.

NEW PRODUCTS AND SERVICES

- In the software development area SAI has introduced a number of new programs.

*INPUT estimate

© 1984 by INPUT. Reproduction Prohibited.

- The Integrated Software Management System (ISMS$^{T.M.}$), introduced in 1983, is used for maintenance of complex military systems.

- In 1984 SAI introduced the Software Design and Documentation Language (SAI-SDDL$^{T.M.}$) which assists in the design, development, and documentation of software.

- Also released in 1984 were IFTES, a software package to determine if a system is operating properly, and a companion package UDITS which identifies faulty equipment.

- The SAI-PMS, Plant Monitoring System, was expanded to accommodate DEC and Gould/SEL computers.

- SAI is also the software quality assurance contractor for two of the Navy's largest software development agencies.

- In the integrated systems area SAI classifies their products into the industry segments of National Security and Energy, Environment, and Health.

 - National Security related integrated sytems projects for 1984 included:

 . The Command, Control, and Communications System developed under contract to the U.S. Navy for the providing of naval operations information.

 . The Space Defense Command and Control System for data base management.

 . The Automated Test Control System for testing air-breathing engines.

 . The Real-Time Monitoring and Control System, which was enhanced to monitor and control instrumental helicopters and air defense systems.

 . The Antisubmarine Warfare Control System being developed by a multiple-contractor government team for which SAI is the system integrator and principal software architect.

 . Training Simulators for aircraft weapon-systems trainers.

 . Flight Crew Avionics Simulators for use in human factors research.

 . The Training, Operations, and Planning Station (TOPS$^{T.M.}$)--a general-purpose, standalone, color-graphics integrated system for strategic war planning.

© 1984 by INPUT. Reproduction Prohibited.

- Energy, Environment, and Health related integrated systems projects included:
 - Emergency Response Facilities systems for monitoring and controlling nuclear power plant operations.
 - Plant Information Systems which function both as emergency response facility and as a plant process computer replacement.
 - Radiation Sampling Systems for on-line sampling and analysis of reactor coolant and containment atmosphere.
 - Stack Monitoring Systems for the analysis of radioactive effluents.

© 1984 by INPUT. Reproduction Prohibited.

SCIENCE APPLICATIONS, INC.
1200 Prospect Street
La Jolla, CA 92137
(714) 454-3811

J.R. Beyster, President and Chairman
Subsidiary of Science Applications International Corporation
Total Employees: 3,827
Total Revenue, Fiscal Year End 1/31/82: $238,474,000
Computer Services Revenue: $49 million*

THE COMPANY

- Founded in 1969, Science Applications, Inc. (SAI) offers diversified research as its primary product, with the researchers and managers themselves owning the company. Historically, the company has offered technical services in the fields of applied science, military software development and application, and military systems. In recent years, it has expanded significantly in the areas of energy, environmental sciences, and health. SAI also engages in the custom assembly of special-purpose computer systems and the manufacture of products that are outgrowths of computer software development and other high-technology activities.

- Effective October 1, 1981, a new parent holding company, Science Applications International Corporation (SAIC), was formed in Delaware to benefit from favorable corporate statutes in that state.

 - Each outstanding share of SAI common stock was exchanged for two shares of SAIC common stock.

 - SAI, which is now a subsidiary, remains a California corporation.

- Because SAI believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company. As a result, at the close of fiscal 1982, approximately 90% of all employees held company stock, either directly or through one of the company's employee benefit plans. Shares not held by employees are almost entirely owned by consultants or former employees. Since the stock is not publicly traded, SAI develops a limited secondary market through Bull, Inc., a wholly owned broker-dealer subsidiary.

- SAI has grown from contract revenues of $81.3 million in 1978 to $238.4 million in 1982, an average annual growth rate of 31%. Computer services revenue is estimated at $49 million in 1982, growing at 25% or more each year. A five-year financial summary follows:

*Company estimate

©1982 by INPUT. Reproduction Prohibited.

SAI
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1/82	1/81	1/80	1/79	1/78
Revenue	$238,474	$187,290	$150,894	$110,099	$ 81,377
. Percent increase from previous year	27%	24%	37%	35%	35%
Income before taxes	$ 12,419	$ 8,625	$ 6,177	$ 4,426	$ 3,526
. Percent increase from previous year	44%	40%	40%	26%	26%
Net income	$ 6,559	$ 4,641	$ 3,353	$ 2,350	$ 1,901
. Percent increase from previous year	41%	38%	42%	24%	24%
Earnings per common share	$ 0.87	$ 0.65	$ 0.50	$ 0.39	$ 0.34
. Percent increase from previous year	34%	30%	28%	15%	15%

- As shown in the chart below, the company's growth is a direct function of contract awards:

	1/82	1/81	1/80
Number of Contracts:			
Awarded	1,696	1,679	1,588
Completed	1,843	1,268	1,211
In Process at Year's End	1,848	1,995	1,584

- The average value per contract award in fiscal year 1982 was $194,000.

- The company is organized into 13 major operating groups and two subsidiaries (plus the brokerage subsidiary). SAI has 150 offices across the country, all of which operate in a decentralized structure.

- Science Applications, Inc. provides services in the following key business areas:

 - National Security: SAI provides scientific research, development, and application programs to develop effective weapons, to generate optimum deployment techniques and procedures, to control and manage defense resources, to train personnel, and to plan for future military operations in support of national policy. National security remains

©1982 by INPUT. Reproduction Prohibited.

SAI's most important single market area, accounting for half of its total business.

- Energy: During fiscal 1982 SAI expanded its energy-related work across a spectrum of fossil, nuclear, and alternative energy programs. SAI also strengthened its role as a prime source of nuclear technology, applying techniques of probabilistic risk analysis at 11 operating nuclear power plants.

- Environment and Health: SAI has helped to devise economically feasible solutions to complex problems associated with preserving the environment and human health. JRB Associates, one of SAI's operating groups, has been involved in assessing the effectiveness of technologies for treating environmental pollutants and controlling occupational hazards. In SAI's analytical and toxicology laboratories, a major undertaking involves the development of technologies for the cleanup of hazardous waste sites and spills. SAI helped to design and manage federal government biomedical research programs and has worked to find ways to reduce the cost of health care while increasing access to quality health care. SAI also operates the largest health and safety services organization in the country, providing a full range of services from facilities planning and design to management and financial services.

- SAI also provides engineering applications of its scientific and technological capabilities, and now offers three major, high-technology product lines designed to measure and display scientific and technical information. SAI's analytic and research studies also have led to the establishment of precise, quantitative measurement services such as the toxicology measurements laboratory that supports SAI's work in assessing hazardous substances in the environment.

- As of January 31, 1982, SAI had 3,827 employees which has since increased to about 4,200 staff members. A breakdown of the professional personnel by education follows (as of January 1982):

Professional Degrees	
Physical Sciences (including Math)	25%
Engineering	22
Computer Sciences	25
Business Administration	18
Social Sciences and Life Sciences	10
	100%

- The company competes with other large, government contract-oriented firms such as Computer Sciences Corporation (CSC) and Planning Research Corporation (PRC) for EDP-related contracts.

©1982 by INPUT. Reproduction Prohibited.

KEY PRODUCTS AND SERVICES

- SAI's $49 million in computer services revenue is divided about equally between professional services and the designing of customized turnkey systems.

- In the software engineering area, SAI develops software to support engineering, modeling, and analysis efforts and also provides formal software development, particularly in the areas of real-time and advanced graphics software.

 - SAI has supported the MX program's software reliability assurance and testing, software data security, special message-processing studies, and other special studies concerning operational employment planning.

 - SAI has developed strategic analysis programs for strategic and cruise missiles and manned strategic aircraft systems. These programs range from detailed engagement analyses of single-offensive-system versus single-defensive-system to broad force-against-force, or total campaign, analysis.

 - Software support services are being provided to the U.S. Army and to NASA's Space Sciences Laboratory in systems and applications programs using HP 2100 computers.

 - Important programs during fiscal 1982 included Antisubmarine Warfare Systems Analysis, Sensor Systems Evaluations, and extensive involvement in the Nuclear Underground Test Program. Software development programs were wide-ranging and included work at SAI's Comsystems Division to develop ocean surveillance display systems and automated diagnostic systems.

 - SAI has developed more effective and reliable software such as tools for requirements and design verification, advanced implementation, and computer-aided testing. Coupled with SAI's independent verification and validation experience, these capabilities offer effective life-cycle acquisition, development, and management support for all types of software programs. The verification and validation of the Air Force Space Shuttle program has concentrated on requirements and design of test sequence software.

 - SAI's Comsystems Division continues as a leader in software quality assurance, providing courses to government agencies to educate military and civilian personnel.

 - JRB Associates, SAI's health and human services organization, continued in fiscal 1982 to provide services in biomedicine, health care, and occupational health and safety. One development was the design of a program of health risk audits that addresses both occupational and environmental concerns, ranging from walk-through surveys to complete liability and risk assessment. In addition, JRB Associates

©1982 by INPUT. Reproduction Prohibited.

conducted more than 200 surveys in fiscal 1982, including a national survey of all NASA facilities to identify hazards, recommend corrective actions, and determine abatement costs.

- In the area of tactical and strategic weapon systems studies and analyses, SAI is continuing a major analysis begun in 1980 of Trident vulnerability and is providing other nuclear hardening assessments to such major systems as the GLCM, and MX, the TACAMO aircraft, and the DSCS III Satellite. In support of these continuing efforts, SAI has been developing sophisticated software analysis aids.

- In the area of systems engineering and integration, SAI assists government and industrial clients in the definition of system and subsystem specifications; the performance of technical feasibility studies; the evaluation of alternative design concepts; the performance of economic trade studies; the development of programs, plans, and documentation; and the coordination of procurement activities, system integration, and program management. SAI also has expanded its systems engineering to encompass the design and installation of instrumentation systems, the design and construction of advanced power generating systems, and the development and fabrication of electronic equipment.

 - SAI has provided systems engineering and analysis support to the Navy in the area of command, control, and communications. This support has included identification of systems, terminals, and interfaces, planning and performance of technical evaluation tests, definition of baseline systems, and mission analysis and other tasks of antisubmarine warfare commands.

 - In fiscal 1982 SAI began focusing on areas of turnkey systems for utilities and products. Particularly, SAI has been heavily involved in incorporating Emergency Response Facility Information Systems (ERFIS) in nuclear power plants. ERFIS is a high-performance mini-computer-based data acquisition and display system that allows assessment of power plant accidents and aids in the orderly shutdown of the plant.

 - SAI has developed a basic product line of high-performance interprocessor interfaces, enabling the company to participate in larger systems procurements in which unique products form a key element in the systems.

 - The Status Display Console (SDC), developed by SAI for the U.S. Army Missile Defense System Command, is a seven-station console incorporated into the real-time data-acquisition system at the Kwajalein Missile Range. The SDC will be used by mission control personnel to quickly and accurately comprehend, diagnose, and react to predicted and abnormal events that occur during range missions.

©1982 by INPUT. Reproduction Prohibited.

- A turnkey network of minicomputers and instrumentation for data acquisition, control, and data reduction was provided for the Northrop Aerosciences Laboratory Wind Tunnel facilities. (Similarly, development is under way for a high-speed data-acquisition system that will support a blow-down wind tunnel in Taiwan.) SAI also is providing Northrop with a high-speed data acquisition and processing system for acquiring, digitizing, and analyzing, in real time, aerodynamic pressure data for aircraft propulsion systems. This system, called a Digital Distortion Analyzer, is the first of its kind.

- The SAI-developed interactive color graphics software product, the SAIGRAPH (an ACM/SIGGRAPH core-compatible graphics library), has been sold to the U.S. Marine Corps, the U.S. Army, Northrop Corp., TRW, and FluiDyne Engineering Corp. It also is being used within SAI as a graphics applications development tool.

- SAI provided real-time tactical operation (training simulators) to the U.S. Army and is developing other, similar programs. These systems include long-term hardware and software development laboratories that assist SAI in other contracts.

- SAI's Comsystems Division is providing system engineering and integration services to shipboard computer systems and will act as a software system architect and integrator.

INDUSTRY MARKETS

- Eighty-five percent of SAI's computer services revenue comes from agencies of the federal government, which includes military as well as civilian projects.

- Fifteen percent of SAI's computer services revenue is related to energy and health care industries.

GEOGRAPHIC MARKETS

- One hundred percent of SAI's computer services revenue is derived from the U.S.

COMPUTER HARDWARE

- Because of the extreme autonomy of the operations, there are many computers in use throughout the company that are user dedicated.

- The company's Computer Services Division in La Jolla has one DEC-10 and one DEC PDP-11/70, and the Systems Division has a DEC VAX-11/780.

- The McLean office has a DEC VAX-11/780 and a DEC-10 remote station.

- JRB Associates has a PDP-11/34, which is used for internal software development.

©1982 by INPUT. Reproduction Prohibited.

- The Huntsville office has a DEC VAX-11/780 and a PDP-11/34.
- The Oak Ridge office has a DEC VAX-11/780.
- The Comsystems division has a DEC VAX-11/780.

©1982 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SCIENCE APPLICATIONS, INC.
1200 Prospect St.
La Jolla, CA 92137
(714) 454-3811

J.R. Beyster, President
Private Corporation
Employees: 3,300
Total Revenues, FYE 1/31/80:
$150,894,000
Computer Services Revenues:
$30 million (Estimate)

THE COMPANY

- Founded in 1969, Science Applications, Inc. (SAI) offers diversified research as its primary product, with the researchers and managers themselves owning the company. Complementing this unique approach is a decentralized, flexible corporate structure comprised of more than 100 offices across the country, providing SAI with the ability to respond rapidly to the needs of its customers. Historically, the company has offered technical services in the fields of applied science, military software development and application, and military systems. In recent years, it has expanded significantly in the areas of energy, environment and health. SAI also engages in the custom assembly of special-purpose computer systems and the manufacture of products which are outgrowths of computer software development and other high-technology activities.

- Because SAI believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company. As a result, nearly 40 percent of all SAI employees have purchased company stock and most of the remaining employees participate in company ownership through a stock bonus plan. Shares not held by employees are almost entirely owned by consultants or former employees. Since the stock is not publicly traded, SAI develops a limited secondary market through Bull, Inc., a wholly owned broker-dealer subsidiary.

- SAI has grown from contract revenues of $31.9 million in 1975 to $150.9 million in 1980, an average annual growth rate of 35%. Today, SAI is among the top five scientific and technical professional service firms in the world. A five-year financial summary follows:

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

SAI
FIVE-YEAR FINANCIAL SUMMARY
(FYE 1/31, $ Thousand)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Total revenue	$150,894	$110,099	$81,377	$59,873	$45,877
. Percent increase from previous year	37%	35%	36%	31%	44%
Income before taxes	$6,300(est.)	$ 4,426	$ 3,526	$ 2,499	$ 2,295
. Percent increase from previous year	42%	26%	41%	9%	49%
Net income	$ 3,353	$ 2,350	$ 1,901	$ 1,302	$ 1,204
. Percent increase from previous year	43%	24%	46%	8%	48%
Earnings per common share	$ 1.00	$ 0.78	$ 0.68	$ 0.48	$ 0.47
. Percent increase from previous year	28%	15%	42%	2%	42%

- As shown in the chart below, the company's growth is a direct function of contract awards:

ITEM \ FISCAL YEAR	Year Ending January 31 1980	1979	1978
Number of Contracts:			
Awarded	1,588	1,160	998
Completed	1,211	896	721
In process at year's end	1,584	1,207	943

- The average value per contract award in fiscal year 1980 was $120,000.

- The company is organized into eight major operating groups and two subsidiaries (plus the brokerage subsidiary).

- Science Applications, Inc., is structured to provide specific applications of science and techology, together with computer and systems technology, to solve complex technical problems in the following key business areas:

 - National Security: SAI provides scientific research, development and application programs to develop effective weapons, to generate optimum deployment techniques and procedures, to control and manage defense resources, to train personnel and to plan for future military operations in support of national policy. National security remains

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

SAI's most important single market area, accounting for half of its total business.

- Energy: SAI's energy work began in 1970 with some of the nation's first research on nuclear security and safety issues. The company's energy market area has now expanded to include work in both energy conservation and the development of alternative energy sources for the future, among which are solar, nuclear fusion, coal liquidification, oil shale, and biomass conversion.

- Environment: SAI engineers tackle design problems to help the industry satisfy new environmental regulations, while SAI economists calculate the cost of meeting these regulations. Meanwhile, SAI toxicologists and health professionals examine the adverse health effects of potentially dangerous substances in the environment, home and work place.

- Health: SAI helped to design and manage federal government biomedical research programs and has worked to find ways to reduce the cost of health care while increasing access to quality health care. SAI also operates the largest health and safety services organization in the country, providing a full range of services from facilities planning and design to management and financial services.

- SAI also provides engineering applications of its scientific and technological capabilities, and now offers three major, high-technology product lines designed to measure and display scientific and technical information. SAI's analytic and research studies have also led to the establishment of precise, quantitative measurement services such as the toxicology measurements laboratory which supports SAI's work in assessing hazardous substances in the environment.

- SAI has 3,300 employees overall. A breakdown of the professional personnel by education and experience follows:

Degrees by Discipline		Professional Degrees		Years of Experience	
Physical Sciences	27%	Doctorate	25%	Over 10	51%
Engineering	23	Masters	34	5-10	40
Mathematics	10	Bachelor's	37	Less than 5	9
Computer Sciences	17	Other	4		
Business Administration	14				
Social Sciences	9				
	100%		100%		100%

- The company competes with other large, government-contract-oriented firms such as Computer Sciences Corp. (CSC) and Planning Research Corp. (PRC) for EDP-related contracts. Most computing in these cases is scientific in nature.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

KEY COMPUTER PRODUCTS AND SERVICES

- SAI's $30 million in computer services revenues divide equally among professional services and turnkey systems. No network services are offered by the company.

- Software Engineering: SAI develops software to support engineering, modelling, and analysis efforts and also provides formal software development, particularly in the area of real-time software and advanced graphics software.

 - SAI has supported the MX program software reliability assurance and testing, software data security, special message processing studies, and other special studies concerning operational employment planning.

 - SAI has developed strategic analysis programs for strategic and cruise missiles and manned strategic aircraft systems. These programs range from detailed engagement analyses of single-offensive-system versus single-defensive-system to broad force-against-force, or total campaign, analysis.

 - Design and development of real-time software for data acquisition and reduction of test data on the Advanced Attack Helicopter were performed for the U.S. Army. Software is currently being defined and developed for the DEC VAX system at White Sands Missile Range which will provide for system operation and control as well as data acquisition and reduction. SAI is also developing a VAX-based data acquisition system which will be used for real-time application at Edwards Air Force Base.

 - Test-data reduction and data-management software for use in the fleet ballistic missile evaluation program were developed by SAI and its subsidiary, SAI COMSYSTEMS, for the Applied Physics Laboratory of Johns Hopkins University.

 - Hardware diagnostics are being developed by SAI COMSYSTEMS for the Navy Integrated Undersea Surveillance System. SAI COMSYSTEMS developed a computer-based skill resource inventory system for the National Aeronautics and Space Administration. SAI support to the Federal Electric Company in the operation and maintenance of Concrete Missile Early Warning Radar includes such tasks as software conversion and maintenance, reduction and analysis of data, tactical exercise generation and documentation.

 - Software support services are being provided to the U.S. Army and NASA's Space Sciences Laboratory in systems and applications programs using HP 2100 computers.

 - Currently SAI has three ongoing subcontracts to the IBM Federal Systems Division:

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

 - Providing software development support for COBRAJUDY.
 - Assisting in defining, designing and implementing enhancements to the Perimeter Acquisition Radar.
 - Providing general software services on a variety of space defense systems.

- SAI has used the computer to assist in the development of more effective and reliable software, including tools for requirements and design verification, advanced implementation, and computer-aided testing. Coupled with SAI's independent verification and validation experience, these capabilities offer effective life-cycle acquisition, development and management support for all types of software programs. The verification and validation of the Air Force Space Shuttle program, in its third year, has concentrated on requirements and design of test-sequence software.

- SAI COMSYSTEMS continues as a leader in software quality assurance, providing courses to government agencies to educate military and civilian personnel.

- In FY 1980, SAI's subsidiary, JRB Associates, developed computer-based systems for advanced techniques in data base management, information storage and retrieval, and data communications. Major projects included the design and installation of minicomputer systems for scheduling and disseminating television and radio programs via satellite networks, the development and installation of an automated microfiche retrieval system, and the development and installation of a management information system.

- Systems Engineering and Integration: SAI is applying its expertise in systems engineering to assist its governmental and industrial clients in the definition of system and subsystem specifications, the conduction of technical feasibility studies, the evaluation of alternative design concepts, the performance of economic trade studies, the development of programs, plans and documentation, and the coordination of procurement activities, system integration, and program management. SAI has also expanded its systems engineering to encompass the design and installation of instrumentation systems, the design and construction of advanced power generating systems, and the development and fabrication of electronic equipment.

 - SAI provided systems engineering and analysis support to the Navy in the area of command, control and communications. This support has been primarily in the identification of systems, terminals and interfaces, the planning and performance of technical evaluation tests, the definition of baseline systems, and the missions analysis and tasks of anti-submarine warfare commands.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- SAI has provided a wide range of services in the instrumentation design and integration area from trade-off analyses to detailed design and specification development. Similarly, SAI is providing a total turnkey data acquisition and data reduction system to Northrop for a new corporate wind tunnel facility.

- SAI has carried out the requirements analyses and system definition for the Department of Energy's Ocean Thermal Energy Conversion System. SAI also provided systems engineering services to the Morgantown Engineering Technology Center, including the design of test systems for the advanced coal gasifier.

- SAI is providing both services and systems for nuclear power plants and is delivering to Union Carbide a sequence of thirteen Rotor Balance Computers.

- SAI provided real-time tactical operation (training simulators) to the U.S. Army and is developing another similar program. These systems include long-term hardware and software development laboratories which assist SAI in other similar contracts.

- SAI developed a flexible, highly modular graphics system for the Marine Corps. This system is a highly distributed architecture, implemented on three PDP 11/60s and microprocessor-based color graphics terminals.

- SAI's subsidiary, SAI COMSYSTEMS, is also providing system engineering and integration services to shipboard computer systems and will act as a software system architect and software integrator for this effort.

- SAI subsidiary Civil Systems, Inc., provides earthquake engineering and has performed analysis for the Defense Nuclear Agency on the underground test programs.

INDUSTRY MARKETS

- Eight-five percent of SAI's computer services revenues comes from agencies of the federal government, which includes military as well as civilian projects.

- Fifteen percent of SAI's computer services revenues are related to energy and health care industries.

GEOGRAPHIC MARKETS One hundred percent of SAI's computer services revenues are derived from the U.S.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

COMPUTER HARDWARE

- Due to the extreme autonomy of the operations, there are many computers in use throughout the company which are user dedicated.
- At the company's in-house data center in La Jolla, there is one each of DEC-10, DEC PDP-11/70, and a VAX.
- JRB Associates, Inc. has a PDP-11/34, which is used for internal software development.
- Comsystems is about to acquire a DEC-VAX.
- SAI does not offer any network services.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Science Applications International Corporation (SAIC)

Chairman & CEO: J.R. Beyster
Vice Chairman: W.A. Owens
10260 Campus Point Drive
San Diego, CA 92121
Phone: (619) 546-6000
Internet: http//www.saic.com



Status:	Employee Owned
Employees:	21,973 (7/96)
Revenue:	$2,155,657,000
Fiscal Year End:	1/31/96

Key Points

- Science Applications International Corporation (SAIC), the largest employee-owned technology firm in the U.S., is a leading provider of diversified research and engineering services as well as systems integration, systems operations, and professional services to government and commercial clients.
- National security revenues have decreased from 50% of total revenues in fiscal 1994 to 45% in fiscal 1996, while revenues from the energy, environment, health, space, transportation and commercial information technology business areas increased from 41% of total revenues in fiscal 1994 to 49% in fiscal 1996, mirroring the company's continued shift of priorities and resources from defense programs to environmental, health care, and transportation concerns.
- SAIC has expanded its systems operations business with major outsourcing awards from several British Petroleum companies, including BPX Columbia, BPX Alaska, BP Indonesia, and BP Vietnam, as well as Mobil Oil. SAIC has also been awarded an outsourcing contract from the Department

© INPUT 1996. Reproduction prohibited.

All brand names and product names are acknowledged to be trademarks or registered trademarks of their owners.

of Defense (DoD) to manage its health information services network.

Company Description

SAIC, founded in 1969, is a diversified, high-technology research and engineering company that offers a range of expertise in technology development and analysis, computer software development and integration, technical support services, and computer hardware and software products.

- The company offers technical and professional services in the fields of national security, energy, health care, space, transportation, and commercial information technology. SAIC is also involved in the custom assembly of special-purpose computer systems and the manufacture of certain high-technology products.

- Information services—including systems integration, professional services and systems operations (outsourcing)—are provided by SAIC to government and commercial clients. These services contributed an estimated $1.4 billion to SAIC's fiscal 1996 revenue.

Because SAIC believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company, either by direct purchase or through several stock option plans. Since the stock is not publicly traded, liquidity is provided by the internal market operated four times a year by Bull, Inc., a wholly owned broker/dealer subsidiary.

Operations and Structure

SAIC's emphasis is in the following four primary business areas:

- Technology Development and Analysis includes research, studies, experiments, analytical software development and application, exploratory design and development, and policy analysis. This kind of work assists SAIC's customers in establishing priorities, understanding engineering trade-offs, defining and evaluating programs, and developing alternative solutions to important technical problems. SAIC provides leading experts in the physical sciences; engineering sciences; computer and mathematical sciences; chemical, biological, and health sciences; operations research; economics; and policy analysis to address these problems.

- System Development and Integration encompasses the design, development, engineering, and installation of integrated hardware and software systems. SAIC applies expertise in computer science, data acquisition, displays, sensors, communications, process control, simulators, signal processing, man-machine interfaces, logistics, and training to provide turnkey systems, subsystems, or prototypes and related support to its customers.

- Technical Support Services include the skilled application of well-established technologies, management tools, software, laboratory procedures, and testing services to government and industry, including laboratory analysis, data processing services, maintenance, and operations of government-owned facilities and ranges; field test services; logistics and training support activities; and management support for major customer programs.

- Manufactured and Software Products include high-technology products that are fabricated or assembled in standard configurations, meet applicable quality

© INPUT 1996 Reproduction prohibited.

assurance standards, and are marketed as product lines. SAIC's current hardware products include military-hardened portable computers, advanced mil-spec display systems, workstations for training, radiography instruments, and computer peripheral interfaces. SAIC also sells and licenses advanced software, including software development, maintenance, and diagnostic tools; program management tools; and advanced applications packages.

SAIC continues to review the changing environment and reformat itself to become more organizationally efficient. The company's fiscal 1996 organization consists of 39 groups that have been aggregated into 12 sectors.

- The sectors principally address military science and technology, major federal and commercial technical agencies, hard sciences, communications and information, systems applications and design, energy, environment, health care, transportation, and manufacturing.

- In the SAIC organizational structure, operating divisions are assigned to operating groups. The SAIC operating divisions are the functional activities that perform the work, with each division being a center of expertise in a specific technology or specific type of work. Each of the operating divisions is assigned to an SAIC operating group for management, administrative, and marketing support.

- The SAIC sectors and groups are each managed by an executive vice president or a senior vice president. These managers coordinate the technical work performed by their divisions and provide resources that have been centralized at their respective sector/group level. Because each sector/group manager has direct communication with all other group managers, the resources of the entire corporation are only a telephone call away.

SAIC's organizational structure and capabilities are summarized in the exhibit that follows. The names of the SAIC operating groups reflect the general interests of most of the groups in science, engineering, environment, health, systems, and technology. The specific interests of the groups extend well beyond their titles, however, for each SAIC group is a center of expertise for solving a specific set of problems.

SAIC has offices in more than 475 locations throughout the U.S. and in strategic locations overseas. Major SAIC office complexes/technology centers house computer centers; laboratories; word processing centers; art, illustration and reproduction centers; technical libraries; and administrative support services.

Key geographical locations are in Albuquerque, Anchorage, Arlington, Atlanta, Boston, Chicago, Colorado Springs, Dallas, Dayton, Denver, Frederick (MD), Hampton Roads (VA), Harrisburg, Honolulu, Houston, Huntsville, Idaho Falls, Indianapolis, Las Vegas, Los Angeles, New York, McLean (VA), Oak Ridge (TN), Omaha, Orlando, Sacramento, San Antonio, San Diego, San Francisco, Santa Barbara, Seattle, Tucson, and Washington, D.C.

International offices are in Australia, Canada, the Czech Republic, Colombia, France, Germany, Hong Kong, Iceland, Indonesia, Israel, Italy, Japan, Jordan, Korea, Mexico, New Zealand, the Philippines, Portugal, Russia, Saudi Arabia, Spain, Thailand, Turkey, the United Arab Emirates, the U.K., Venezuela, and Vietnam.

© INPUT 1996 Reproduction prohibited.

Exhibit
SAIC Organization

Sector/Group	Sector/Group
Advanced Technology and Analysis Sector - Applied Technology Group Software Development and Maintenance Systems Engineering/Integration Simulation Studies and Analyses Threat Analysis Radar Systems Analysis Sensor Development Cost Analysis Management Information Systems Geographic Information Systems - Defense Analyses Group Sensors and Surveillance Technology Assessment Strategic Defense Systems Information Processing Simulation and Modeling Analytical and Technical Support Aerodynamics and Avionics - Defense Technology Group Nuclear Weapons Effects Military Systems Survivability Directed Energy Weapons Advanced Accelerator Technology Defense Conversion Nonproliferation Technology Electric Gun Technology - Technology Analysis and Applications Group Thermal Analysis and Simulation Hypersonic Technology Missile Systems Technology Nuclear Weapons Effects Process Reliability Technology Electro-Optics Intelligence Analysis Magnetic Fusion Technology Logistics Technology Probabilistic Risk Assessment - Test and Evaluation Group Test and Evaluation Operations and Maintenance Models and Simulations Electronic Combat/Warfare Joint Test and Evaluation SETA Support C3I Systems Analysis and Engineering	Logistics Planning Space and Space Defense Software Development Data Base Management (DBM) Security Accreditation Space Systems Development Model Development Test Support **Commercial Technology Sector** - Information Resources Group Information Technology Applications Development and Maintenance Systems Engineering Facilities Management - Real-Time Systems Group Real-Time Systems Integration Plant Monitoring Systems Leak Detection Services Security Systems (Commercial/Utilities) SCADA Systems (Gas and Oil) - Technology Development Group Radiation Monitoring Instrumentation Nondestructive Evaluation/Instrumentation Visible/UV/IR Sensors and Systems Solar Collections Fuel Cells Advanced Composite Materials **Energy, Environment and Engineering Sector** - Energy and Environment Group Nuclear Reactor/Utilities Environmental Planning Environmental Technology Pollution Prevention ESH Support Safety Analysis - Energy Systems Group Nuclear Facility Safety Regulatory Compliance Environmental Restoration Waste Management Emergency Management Technology Transfer and Development Information Systems and Services DOE Headquarters Support Water Resource Management Land Use Planning

© INPUT 1996 Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
- Engineering and Environmental Compliance Group Hazardous and Radioactive Waste Management Environmental Regulatory Compliance Environmental Assessment and Analysis Education/Communication/Outreach Programs Environmental Remediation/Restoration Risk/Health Assessment Regulatory Compliance Training Environmental Quality Assurance Decontamination and Decommissioning Environmental Data Management - Environmental and Health Sciences Group Occupational Health and Safety Pollution Prevention Environmental Studies and Analyses Regulatory Development Support Scientific Applications International Environmental Programs Health Studies and Counseling Environmental Engineering Aquatic Sciences - R.E. Wright Environmental Group **Health Care Technology Sector** - Commercial Group - Federal Group **Information and Technology Systems Sector** - Information and Communications Technology Group Air Traffic Control Systems Antisubmarine Warfare Automated Data Processing (ADP) Automated Tools (CASE) Development Business Process Reengineering Command and Control Systems (C2, C3, C3I, C4) Client/Server Systems Data Management (DM) Document Imaging Systems Hardware Development & Integration Independent Verification & Validation (IV&V) Integrated Logistics Support (ILS) Knowledge-Based Prototyping Multimedia Networking (LAN/WAN) Open Systems Relational Data Base Management Systems Satellite Communications Systems Systems Integration Systems Engineering Telecommunications Video Teleconferencing	- Information Systems and Technology Group Information Systems Management Mission Planning Systems Communications Systems Prototyping Decision Support Systems Development CASE Tools Systems Engineering Communications Networking Software Engineering/Development Systems Integration Data Base Management Battle Management C3 MIS Engineering SATCOM Engineering Communications Engineering Network LAN Systems Development Space Technology C3 Systems Analysis and Engineering Modeling - Major Systems Group Embedded Computer System Software Architecture, Development & Integration Engineering Services Counter Narcotics JMA Assessments Surveillance Harbor Defense Security Systems Specialized Computer Installations Undersea Warfare - Software and Systems Integration Group Large Systems Integration Projects Ada Technology Software Design and Development Health Information Systems Undersea Warfare Systems Analysis Operational Survivability Evaluations C3I Systems Development and Integration Cover, Concealment, and Deception International Systems Integration Projects Information Engineering Law Enforcement Information Systems **Studies and Systems Sector** - Maritime Engineering Group Offshore Telecommunications Cable Installations Mammal Training Hydrographic and Geophysical Surveys

© INPUT 1996 Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
Submarine Life Support Systems Design Ocean Engineering - National Security Studies and Strategy Group Arms Control/Treaty Verification Political Military/Regional Analysis Nuclear Stockpile Management Weapon Systems Analysis Intelligence Analysis Support Former Soviet Union Analysis Foreign Treaty and Technology Assessment Program Management Support Policy Analysis Planning and Operations Strategic Organizational Planning/Development Technology Evaluation/Application Human Performance - Space, Earth, and Atmospheric Sciences Group Earth, Ocean, Atmospheric, and Space Sciences Satellite Data and Information Management Astronomical Research and Advanced Image Processing Advanced Mission Planning and Space Technology Studies Commercial Meteorological Data Collection, Processing, Visualization, and Distribution Global Change Studies Global Modeling and Simulation Environmental Modeling and Emergency Response Management - Systems Technology Group Civil Aviation Electronic System Manufacturing Facilities Management Human Factors Engineering Information Security Engineering Information Systems Physical/Technical Security Process Reengineering Records Management Systems Signal Analysis & Processing Software Development Studies and Analysis Surface & Air Weapons Systems Engineering/Technical Assistance Systems Integration Test and Evaluation	**Systems and Technology Products Sector** - Products Group - Programs Group Portable Workstation Manufacturing Display Manufacturing--Sunlight Readable Systems Integration Systems Engineering Product Development Software Development Military Tactical Protocols Tactical Communications Mobile Systems **Technology and Advanced Systems Sector** - Applied Systems Group Acquisition and Program Management Support Intelligence Data Handling Systems Imagery Systems and Remote Sensing Client/Server Architectures Process Improvement and Analysis Systems Analysis Classified Systems C4I System Simulation, Development, Wargaming Wargaming and Exercise Support Systems Engineering and Technical Assistance - ASSET Group Simulation-Based Training Semi-Automated Forces Development Software Technology Software Reuse and Reengineering Ada CASE Tools Ada Software Development Software Process Improvement Command and Control Systems Digital Library Service World Wide Web Support Information Technologies/Systems Meteorology - Space and Defense Group Space System Design, Analysis, Engineering Space System Integration and Sustainment Modeling and Simulations for Military Applications Decision Support Analysis Support to Planned and Ongoing Operations Applied Research and Technology Operational Software Development Information Management Systems and Environments

© INPUT 1996 Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
- Technology Research Group Hydrodynamics and Ship Design Signal and Data Processing Synthetic Aperture Radar Computational Fluid Dynamics Signature Management Radar and Electro-Optics Sensor Analysis Air Defense System Design Image Processing and Analysis Mapping, Charting and Geodesy Distributed Simulation Technology **Technology Applications Sector** - Network Solutions Group Antenna Systems Automation Systems Client/Server Data Base Design Computer-Based Training Systems Compact Disk & Optical Systems Information Technology Intelligent Building Design Internet and Information Services LAN/WAN/FDDI Designs Multimedia Network Engineering & Integration Office Automation Systems RF Communications Technology/Electronics Satellite Communications Engineering Site Survey and Installation Systems Engineering Telecommunications Engineering Transportation Systems Analysis & Design Weather Systems and Analysis - Technology Applications Group Training Intelligence Systems Integration Reverse Engineering (Hardware/Software) Manufacturing Technology Office Automation Multimedia Videoconferencing Process/Productivity Improvement WAN/LAN Networking Software Development System Development Event Production Network Integration	**Technology Solutions Sector** - Applications Development Information Technology Database Technology Object-Oriented Technology Software Systems Development Administrative Systems Maintenance Client/Server Development Business Process Reengineering IT Strategic Planning Asset Management Database Development and Management Software Engineering Legacy System Sustaining Engineering Project Management Data Warehouse - Information, Security, and Training Services - Information Systems Solutions Systems Engineering Systems Integration Database Engineering Information Engineering Software Life-Cycle Management Client/Server/Network Engineering Information Security Lotus Notes Engineering **Transportation Sector** - Engineering Logistics and Information Systems Group Systems Engineering Technical Assistance Logistics Management Support Systems Information Engineering Software Support Environments Engineering, Design, & Development Logistics Support Simulation & Simulation Modeling Logistics Information Systems Avionics Support Engineering Technology Transfer Mission/Utility Analyses Training Simulators/Systems - JHK & Associates Intelligent Transportation Systems Commercial Vehicle Operations Intermodal Surface Transportation Efficiency Act (ISTEA) Systems Traffic & Transportation Engineering Consulting Major Investment Studies

© INPUT 1996 Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
- Syntonic Software Consulting Products Toll Systems Installation and Maintenance Integration Two-Way Radio Communications Systems Research and Development Microwave Systems Inventory Control Systems Intermodal Systems - Transportation Solutions Group Rail Information Systems Commercial Vehicle Operations Systems International Trade Data Systems State DMV Systems Modernization Economic and Policy Analysis Logistics and Operational Planning Expert Legal Testimony Operations Research Border Operations Program Management Organization Development Strategic Planning Facilitation/Consensus Building	**Independent Groups** AMSEC - Command and Control/Combat Systems Support - Electronic Services - Environmental Services - In-Service Engineering - Instructional Systems Development (ISD) Training - Maintenance Engineering and Field Service Support - Integrated Logistics Support - Metrology Engineering - Port Engineer Services - Technical Documentation/Computer-Aided Design - Installation Design - Repair and Modernization Planning - Operator and Maintenance Planning - Fleet Tactics Development and Training Major Programs Group - Chemical Demilitarization - Nuclear Waste Management - Nuclear Quality Assurance - Geotechnical/Engineering Support Services - Health and Safety Protection Management Systems - Performance-Based Training - Major Programs Management - Biomedical Sciences - Biomedical Modeling - Environmental Monitoring and Compliance Range Systems Group - Airborne Training Ranges - Airborne Test & Evaluation Ranges - Ground Forces Combat Training Centers - Naval Training Ranges

SAIC's major operating subsidiaries include the following:

- American Systems Engineering Corp. (AmSEC) (Virginia Beach, VA) provides ship overhauls, instructional software and design services, and operations and maintenance support services for the U.S. Navy.
- General Sciences Corporation (Laurel, MD) provides information analysis, scientific research, and application systems development services in the areas of global change, astronomy, meteorological and oceanography research, and global circulation modeling.
- Hicks & Associates, Inc. (McLean, VA) is a consulting firm offering services in proposal

© INPUT 1996. Reproduction prohibited.

development, strategic planning, and technical problem solving and advice on mergers, acquisitions, and executive searches.

- JHK & Associates, Inc. (Emeryville, CA), acquired in January 1994, provides transportation planning and systems engineering to the private and public sectors, with expertise in multimodal transportation, intelligent transportation systems, and traffic engineering and design.

- Network Solutions, Inc. (Herndon, VA), acquired in May 1995, is a network integration subsidiary that specializes in the Internet, interoperability, and network management. Services include requirements analysis, design, installation, operation, maintenance, and consulting.

- Pathology Associates International Corporation (Frederick, MD), acquired in June 1995, provides preclinical biomedical product development, health effects assessment studies, and related biomedical research support services.

- R.E. Wright Environmental, Inc. (Middletown, PA), acquired in January 1995, provides environmental engineering and construction management services for environmental problems.

- Syntonic Technology, Inc. (Harrisburg, PA), acquired in early 1995, focuses on systems integration of electronic toll collection systems and traffic management and communications systems.

SAIC has recently acquired, along with existing management and employees, interests in two European telecommunications software companies from GSI of Paris.

- One company is Tecsi, a Paris-based supplier of telecommunications systems, software, and systems integration services. Tecsi, with annual revenues of $37 million and 250 employees, is now approximately 43% owned by SAIC, with the remainder owned by France Telecom and Tesci employees.

- The second company, Danet, also supplies telecommunications systems, software, and systems integration services. Located in Darmstadt (Germany), Danet has $40 million in annual revenue and 300 employees. It is approximately 42% owned by SAIC, with the remainder owned by Deutsche Telekom and Danet employees.

In August 1995, SAIC made a 25% equity investment in Symmetrix of Lexington (MA), a provider of reengineering services to major global industrial, financial, and telecommunications companies.

Company Strategy

SAIC's mission statement is:

"SAIC is a company of people dedicated to delivering best-value services and solutions based on innovative applications of science and technology."

Financials

SAIC's fiscal 1996 revenue reached nearly $2.16 billion, a 12% increase over fiscal 1995 revenue of $1.92 billion. Net income rose 17%, from $49.1 million in fiscal 1995 to $57.3 million in fiscal 1996. A five-year financial summary is shown on the following page.

© INPUT 1996 Reproduction prohibited.

Science Applications International Corporation
Five-Year Financial Summary
($ Millions, except per share data)

Item	Fiscal Year				
	1/96	1/95	1/94	1/93	1/92
Revenue	$2,155.7	$1,921.9	$1,670.9	$1,504.1	$1,285.3
• Percent change from previous year	12%	15%	11%	17%	11%
Income before taxes	$102.3	$79.7	$69.8	$60.1	$55.6
• Percent change from previous year	28%	14%	16%	8%	3%
Net income	$57.3	$49.1	$41.5	$38.1	$33.6
• Percent change from previous year	17%	18%	9%	13%	1%
Earnings per share	$1.13	$1.01	$0.89	$0.83	$0.75
• Percent change from previous year	12%	13%	7%	11%	3%

Revenue Analysis by Product/Service

It is estimated that approximately $1.4 billion (65%) of SAIC's fiscal 1996 revenue was derived from information services-related activities, segmented approximately as follows:

Systems integration	78%
Professional services	12%
Outsourcing services	10%
	100%

SAIC's operations are classified into two broad segments—Technical Services and Products. The Technical Services segment is further classified into the National Security, Environment, Energy, and Other business areas. Other business areas include health, space, transportation, and commercial information technology.

- Technical Services consist of applied and basic research; analysis and development of new and existing policies, concepts, systems, and programs; design and development of computer software; systems engineering; systems integration; test and evaluation of new products or systems; technical operational and management support; environmental engineering; and engineering support to existing facilities, laboratories, and systems.

- Products include custom-designed and standard hardware and software products such as data display devices, "ruggedized" personal computers, sensors, and nondestructive imaging instruments. These products typically incorporate SAIC-developed hardware and software, as well as hardware and software manufactured by others.

A three-year summary of source of revenue by business segment follows:

© INPUT 1996 Reproduction prohibited.

Science Applications International Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1/96		1/95		1/94	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Technical Services						
- National Security	$966.9	45%	$891.2	46%	$830.6	50%
- Environment	274.3	13%	264.5	14%	253.9	15%
- Energy	166.3	8%	169.7	9%	156.7	9%
- Other (*a*)	593.7	27%	423.4	22%	287.6	17%
Products	153.2	7%	171.2	9%	140.8	8%
Interest income	1.3	--	1.9	--	1.3	--
Total (b)	$2,155.7	100%	$1,921.9	100%	$1,670.9	100%

(a) Includes health care, space, transportation, and commercial information technology.

(b) Differences due to rounding.

Although National Security revenues have declined as a percent of total revenues, these revenues increased 8% in fiscal 1996, 7% in fiscal 1995, and 9% in fiscal 1994 over the prior year, in spite of declines in the overall defense market during these periods. The U.S. government maintained funding in areas in which SAIC has strong capabilities, such as research and development, training, simulation, and test and evaluation.

Revenues in the Environment business area decreased slightly as a percent of total revenue and Energy revenues declined slightly.

Other Technical Services revenues have increased 40% during fiscal 1996, 47% during fiscal 1995, and 20% during fiscal 1994, reflecting the company's expansion into the health, transportation, and commercial information technology markets and mirroring the country's shift of priorities and resources from defense programs to civilian programs in areas such as health care and transportation.

Products revenues decreased 11% during fiscal 1996 and are tied to the stage of contract performance and the purchasing needs and capabilities of the customers, which can fluctuate from year to year.

The mix of contracts for fiscal 1996 consisted of 54% cost reimbursement, 26% time and materials and fixed-price level-of-effort, and 20% firm fixed-price, compared to 59% cost reimbursement, 22% time and materials and fixed-price level-of-effort, and 19% firm fixed-price in fiscal 1995.

Revenues for fiscal 1997 are expected to reach $2.4 billion.

Market Financials

Revenue from the U.S. government, either as a prime contractor or subcontractor, accounted for 83% ($1.79 billion) of SAIC's

© INPUT 1996 Reproduction prohibited.

total revenue in fiscal 1996, compared to 86% ($1.65 billion) of total revenue in fiscal 1995, and 88% ($1.47 billion) of total revenue in fiscal 1994.

The remainder of SAIC's revenue ($365 million in fiscal 1996, $270 million in fiscal 1995, and $200 million in fiscal 1994) was derived from state and local government and commercial clients.

SAIC's principal markets include national security, energy, environment, health, space, transportation, and information technology.

Geographic Markets

Virtually all of SAIC's revenue is derived from sales to U.S. customers.

Employees

SAIC's employees are segmented approximately as follows:

Technical/professional	75%
Managerial	13%
Administrative	12%
	100%

As of January 1996, SAIC had 19,500 full-time employees, compared to 16,700 at the end of fiscal 1995 and 15,400 at the end of fiscal 1994. Approximately 1,600 employees were added through acquisitions during fiscal 1996.

As of June 1996, SAIC had 21,973 employees, including about 1,000 overseas employees, counting both nationals and expatriates. SAIC's Sector employees (excluding corporate staff) are aligned as follows:

Advanced Technology & Analysis	1,809
Commercial Technology	966
Energy, Environment & Eng.	2,237
Health Care Technology	1,570
Information & Technology Sys.	1,652
Studies and Systems	1,838
Systems & Technology Products	406
Technology & Advanced Systems	1,720
Technology Applications	1,037
Technology Solutions	1,407
Transportation	1,497
AMSEC Group	1,174
Major Programs Group	671
Range Systems Group	90

Key Products and Services

This section will focus on the information services provided by SAIC, which are offered through most of SAIC's Sectors.

SAIC's systems integration services include analysis/requirements, design, development, installation/testing, and maintenance/support.

The company's expertise in database management includes database integration, data navigation and mining, database creation/maintenance, extensive Oracle experience, graphical user interfaces, interactive kiosks, pen-based systems, and algorithms/numerics.

SAIC's experience in computer software has included top-level structure, systems architecture, and network designs for major software packages; systems analysis, programming, compiling, and debugging; verification and validation of software developed by SAIC and other firms; software maintenance and conversion or upgrading of software; use of CASE tools; personnel training in software development and

© INPUT 1996 Reproduction prohibited.

maintenance; and systems engineering and technical assistance.

SAIC computer security specialists have experience in penetration analysis and evaluation; vulnerability analysis and evaluation; security risk assessment; secure system design, implementation, and installation; security engineering and trusted software development; contingency planning; security testing; and accreditation.

SAIC's mainframe-to-client/server migration expertise includes migration strategies, extensive software development migration experience, client/server engineering, LAN performance tuning, LAN management, network security, and Lotus Notes engineering experience.

SAIC's Internet services include helping customers use the World Wide Web and Internet technology for electronic commerce, advertising, and marketing, customer support, public relations, and electronic publishing.

SAIC is versed in a range of programming languages, database management systems, network and communications environments, and hardware and operating platforms.

SAIC's information services-related activities are summarized below:

Information Technology

SAIC offers a range of information technology services, including consulting, systems integration, and outsourcing services. The company's expertise includes open systems, client/server architectures, networks, and software development.

SAIC was selected by British Petroleum Exploration (BPX) as one of three companies to be worldwide partners in outsourcing BPX's computer facilities and applications. SAIC manages BPX's European applications and runs its computer operations in Aberdeen (Scotland). SAIC also migrated BPX systems from proprietary environments to client/server architectures.

Other project examples include the following:

- Providing a Web site for the 1995 America's Cup sailing race. SAIC has also developed Web sites for the Republican National Committee site; the FBI Law Enforcement Online site; the EPA's ENVIRONFACTS site; and the Commerce Department's TradePort site helping U.S. businesses export overseas.
- Helping develop the new joint technical standard that Visa and MasterCard will use to protect credit card purchases made over the Internet
- Providing reengineering services to a major property and casualty insurance company for its customer services operation (through Symmetrix)
- Providing business process reengineering to Pacifi-Corp's Wholesale Transmission and Transactions business unit
- A follow-on contract to support U.S. government agencies through the Federal Systems Integration and Management Center
- Assisting the U.S. Internal Revenue Service to modernize its information systems
- Developing a network of 200 routers, 400 file servers, and 500 intelligent hubs for NationsBank (through Network Solutions)

© INPUT 1996 Reproduction prohibited.

- Providing consulting to the Florida Department of Labor in the area of electronic document management in processing workers' compensation and dispute resolution cases
- Developing a business-based information protection plan for one of the world's largest insurance companies
- Preparing an information crisis management plan for one of the world's largest brokerage firms
- Assisting Sun Federal to develop a secure operating system for the Sun workstation family that complies with Defense Intelligence Agency secure computing requirements
- Assisting the U.S. Patent and Trademark Office to automate the processing of patent and trademark applications
- Designing modular physical security systems for large facilities and airports, including J.C. Penney and airports in Anchorage, Boise, Brussels, Denver, Honolulu, Memphis, New York, Orange County, and San Diego

Health Care

SAIC provides integrated systems to private sector and government hospitals and clinics for computerized patient records, integrated delivery systems, outcomes management, enterprise-wide telecommunications, and legacy system upgrades.

For the Department of Defense (DoD), SAIC designed and built the Composite Health Care System (CHCS)—the largest health care information system in the world. CHCS, deployed at 550 DoD medical sites, connects departments, wards, and outlying clinics, integrating their information with computerized patient files.

In March 1995, SAIC was awarded a $235 million contract by the DoD (Defense Medical Information System/System Integration, Design, Development, Operation, Management System). SAIC will assist in the selection, use, development, and application of hardware and software technologies to meet current and future military health care information system requirements, including the operation and maintenance of software and data collection functions.

In early 1995, SAIC was awarded a contract with the DoD to build community networks linking military medical facilities (using CHCS) with civilian providers and VA medical centers.

For the Department of Veterans Affairs, SAIC designed and is integrating and operating a multimillion-dollar telecommunications network to link more than 375 sites, including medical centers, clinics, benefits offices, and data processing offices in all 50 states, Puerto Rico, and the Philippines.

In May 1995, SAIC was selected to help Kaiser Permanente build its next-generation computing and network infrastructure to support the HMO's clinical and business operations.

SAIC is working with Saint Luke's Health System to link hospitals and outpatient facilities in Kansas and Missouri.

For the Harris Methodist Health Services Group in Fort Worth (TX), SAIC has supplied a clinical workstation toolset that supports sharing of patient and business information.

© INPUT 1996 Reproduction prohibited.

SAIC is automating clinical systems in AtlantiCare hospitals, clinics, and physicians' offices (New Jersey).

National Security

SAIC has supported the military with systems for command and control, advanced simulation, policy research, information security/warfare, intelligence systems, logistics, range systems, military technology, and military workstation products.

Recent examples of SAIC's information services work for the federal government are summarized as follows:

- In October 1995, SAIC was awarded a $28 million contract to support the Space and Naval Warfare Systems. SAIC will integrate computers and software to implement an electronic key management system for automatic communications security.

- In October 1995, SAIC was awarded an indefinite delivery, indefinite quantity contract to provide software support services to the Army Information Systems Software Command. SAIC will provide communications software design and analysis and software development, testing, maintenance, extension, and installation services.

- In August 1995, SAIC was awarded a five-year contract worth up to $200 million to provide information systems support to the Internal Revenue Service.

- The Defense Information Systems Agency selected SAIC to integrate the Global Command and Control System (GCCS) to support the commanders-in-chief of the unified commands. GCCS is a global command, control, communications, computer, and intelligence system that will directly link and support combat troops for all U.S. armed services.

- Under the company's largest C^3 win last year, SAIC will perform a major upgrade to a command and control system it developed for Saudi Arabian naval forces.

- In July 1995, SAIC was among those awarded a contract from the Defense Information Systems Agency to provide information systems security services and products to various government agencies. SAIC's portion of the contract is estimated at $300 million.

- SAIC has developed electronic key management systems for the U.S. Army, Navy, and Air Force, and last year began developing a major component of the new DoD system.

- In January 1995, SAIC was selected as part of the Hewlett-Packard team to support the Navy's TAC-4 program. SAIC will provide systems integration, rugged versions of HP workstations, and systems engineering services. SAIC's potential portion of the contract will be up to $160 million.

- In January 1995, SAIC was chosen as a subcontractor to TRW for the Army's Force Battle Command Brigade and Below program. SAIC will provide commercial and ruggedized computers, communications interface hardware, software development, and supporting integration services. SAIC's portion of the contract is $35 million.

- Under a major new contract from the DoD Central Imagery Office, SAIC began integrating the new U.S. Imagery System

© INPUT 1996 Reproduction prohibited.

for military operations, defense agencies, and the intelligence community.

- The U.S. Navy has contracted with SAIC to improve network protocols used for TCP/IP and ATM networks in support of the 1997 Synthetic Theater of War demonstration.

- SAIC completed a major architectural design of core simulation software (SIMCORE) for the ARPA's War Breaker program.

- SAIC is supporting the DoD's renovation of the Pentagon, creating an enterprise network of shared communications and computing services. This work is part of a major five-year, follow-on contract awarded in 1994 by the U.S. Army Information Systems Engineering Command.

- SAIC has won five Design Engineering Program contracts for the U.S. Air Force Material Command. The company also supports all five U.S. Air Logistics Centers.

- SAIC has supported the Software Engineering Directorate at the U.S. Army Missile Command to upgrade the software skills of its staff.

SAIC has performed a range of database management work for the federal government, including:

- The design, development, and maintenance of a geophysical database as part of the U.S. Air Force's UMBRELLA program

- Implementing a complete system for the Department of Energy's Energy Information Administration (EIA) that tracks all projects and deliverables produced by EIA

- Developing a complete system for tracking all research sponsored by the Department of Energy

- Developing and operating an on-line system for tracking all nonclassified shipments of nuclear material by the Department of Energy

- Systems engineering support for two of the largest text database applications in the world—one for the U.S. Patent and Trademark Office and the other for a major intelligence community customer

Law Enforcement

SAIC integrated the first automated fingerprint identification system for the FBI. This system is now designed to serve 60,000 local, state, and federal law enforcement agencies.

During 1995, SAIC was awarded a $27.6 million contract by the FBI to build the Interstate Identification Index—a national criminal history system. SAIC will migrate an old mainframe-based system to a client/server architecture.

SAIC has designed and implemented the Joint Maritime Information Element to be employed in the war on drugs. This system provides a classified communications network for sharing data between the U.S. Coast Guard, the Justice Department Drug Enforcement Agency, the Customs Service, and 11 other agencies.

For the Georgia Department of Corrections, SAIC is designing an image-based electronic file system to manage offender records.

© INPUT 1996 Reproduction prohibited.

For the New York Police Department, SAIC is integrating a distributed booking system that will allow the city to redeploy 300 officers from office duties to the field.

Environment

ENVIRONFACTS, a new database developed in large part by SAIC, debuted on the Internet in March 1995. ENVIRONFACTS allows users to search easily through various EPA databases for information.

During 1994, SAIC helped the EPA integrate a variety of legacy systems into one uniform multimedia system that simultaneously manages air, water, and hazardous waste data.

SAIC assisted the EPA in developing the Pollution Prevention Information Exchange System (PIES), which provides 24-hour, free access to multimedia technical and program information on pollution prevention alternatives.

SAIC led a multiagency effort to combine databases on pollution prevention associated with solvents into one database linked to PIES.

Geospatial Information

For the National Oceanic and Atmospheric Administration, SAIC transferred technology used in the Defense Mapping Agency to create digital map displays for the National Weather Service.

For the U.S. Geological Survey, SAIC used DoD mapping technology to create the next generation of topographic maps.

Energy

SAIC offers plant monitoring, security and supervisory control, and data acquisition systems for the utility industry.

During 1995, SAIC began installing plant monitoring systems at the Waterford, Susquehanna, Perry, and Sequoyah nuclear plants.

In the area of plant information engineering, SAIC integrates business process reengineering with information technology consulting. This resulted in contracts with British Petroleum and Centerior Energy to define optimal processes and information technology architectures at refineries and power plants.

With the Idaho National Engineering Laboratory, SAIC is developing and commercializing RELAP, the premier safety analysis code for use in nuclear power plant simulators. SAIC is currently upgrading simulators at the Nebraska Public Power District and Trnava training center in Slovakia using RELAP models.

During 1994, SAIC was awarded a contract with Duke Power Company—one of the largest contracts to date—to replace plant process computers in the nuclear utility industry.

Pennsylvania Power & Light has chosen SAIC to replace existing process monitoring computer systems at its Susquehanna plant.

Other energy clients include Taiwan Power Company, Entergy Corporation, Tennessee Valley Authority, Carolina Power & Light, American Electric Power, Pittsburgh Energy Technology Center, and San Diego Gas & Electric.

© INPUT 1996 Reproduction prohibited.

Transportation

SAIC provides a range of services and customized systems to ground, water, and air transportation customers worldwide.

SAIC was one of the nation's first companies to apply radio frequency identification technology to the transportation industry. SAIC-developed systems now automatically track cars, buses, trucks, airplanes, and the cargo they contain.

- One of SAIC's fastest growing business areas is automatic equipment identification (AEI) systems for railroad companies. SAIC is providing AEI systems for the Houston Belt & Terminal Railway Company, the Canadian Pacific Rail System, the Port of Tacoma, Union Pacific, Conrail, and Burlington Northern Sante Fe.

- Expanding into other markets, such as intermodal yard management and ports, SAIC recently installed low-speed AEI systems for the in/out gates at two major Union Pacific intermodal yards.

SAIC also supplies electronic toll and traffic management systems to a range of state and local government agencies.

- TST won contracts to provide toll systems for the Lantau Fixed Crossing at the new Hong Kong airport and for Malaysia's first private toll facility (the Kuala Lumpur-Karak Tollroad).

- SAIC has installed the I-PASS system for electronic toll collection on Chicago's North-South Tollway, and in highway and/or bridge toll booths in California, Florida, Washington D.C./Northern Virginia (Dulles Greenway), and Massachusetts.

- SAIC has developed an electronic transportation management system using an automatic vehicle identification system to monitor the interterminal and long-term parking lot bus services for the Port Authority of New York and New Jersey's JFK International Airport.

- SAIC's JHK & Associates subsidiary designed and integrated a statewide center for traffic management for the State of Maryland.

- For J.B. Hunt, the second largest trucking company in North America, SAIC integrated a dispatch, monitoring, and control system for touch-screen tablet computers. Truck drivers can use the mobile computers to communicate directly with dispatchers.

In the area of aviation, SAIC provides a range of professional and systems integration services:

- SAIC continues to support Loral with air traffic control software for the U.S. and other countries.

- SAIC is integrating critical aeronautical information from a range of National Airspace System resources into a single system to help the FAA expedite air traffic flow.

- Building on work for the Denver International Airport, SAIC developed the concept for an integrated airport ground-side operating system, linking major airport information systems to a common technology core and supporting real-time management of airport operations.

The TravTek project, to be demonstrated in Orlando (FL), will provide traffic information, motorist services information,

© INPUT 1996 Reproduction prohibited.

tourist information, and route guidance to operators of 100 test vehicles equipped with TravTek devices.

Amtrak awarded SAIC a worldwide marketing license for its computer-aided train dispatching system. With this agreement, SAIC can provide any transit or railroad company with a customized system for improving traffic flow and safety.

Marketing and Sales

SAIC Corporate Development has 12 full-time market development personnel.

Although it varies over time, on average the SAIC Sectors have about 200 people directly assigned to market development.

In addition, SAIC has arrangements with outside consultants to assist in marketing specific opportunities. However, as an employee-owned company, most of SAIC's employees "market" their services through market development on existing contract engagements.

Alliances

SAIC has alliances/marketing agreements with a range of vendors, including the following:

- Sybase (health care and oil and gas markets)
- Symmetrix (banking and insurance markets)
- HBO & Company (health care)
- Amtrak (rail transportation)

Competitors

SAIC's major competitors for information services-related contracts include Computer Sciences Corporation, PRC (Litton), Booz Allen Hamilton, BDM, and EDS.

Assessment

SAIC's strengths in the information services arena include:

- Significant experience in systems integration projects for the federal government since 1969
- Expansion of offices in international markets
- A network of strategic office locations near its major customers to facilitate communications
- A track record of true "open systems" integration to meet customers' needs
- Broad-based employee ownership that serves as a key economic motivator to achieve top performance

Challenges over the coming year include:

- Increasing market share in a declining federal and defense market
- Adjusting to the acquisition reform initiatives of the Clinton administration and Congress
- Increasing market share in the company's commercial and international business areas

© INPUT 1996 Reproduction prohibited.

IT2000

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1995

Science Applications International Corporation (SAIC)

Chairman & CEO: **J.R. Beyster**
President & COO: **L.A. Kull**
10260 Campus Point Drive
San Diego, CA 92121
Phone: **(619) 546-6000**

SAIC®
An Employee-Owned Company

Status:	Employee Owned
Employees:	20,576 (10/95)
Revenue:	$1,921,880,000
Fiscal Year End:	1/31/95

Key Points

- Science Applications International Corporation (SAIC), the largest employee-owned technology firm in the U.S., is a leading provider of diversified research and engineering services as well as systems integration, systems operations and professional services to government and commercial clients.
- National security revenues have decreased from 51% of total revenues in fiscal 1993 to 46% in fiscal 1995, while revenues from energy, environment, health, space, transportation and commercial information technology business areas increased from 41% of total revenues in fiscal 1993 to 46% in fiscal 1995, mirroring the company's continued shift of priorities and resources from defense programs to environmental, health care and transportation concerns.
- SAIC has expanded its systems operations business with major outsourcing awards from two British Petroleum companies—BPX Columbia and BPX Alaska—and an outsourcing contract from the Department of Defense (DoD) to manage its health information services network.

© INPUT 1995. Reproduction prohibited.

Company Description

SAIC, founded in 1969, is a diversified, high-technology research and engineering company that offers a range of expertise in technology development and analysis, computer software development and integration, technical support services and computer hardware and software products.

- The company offers technical and professional services in the fields of national security, energy, health care, space, transportation and commercial information technology. SAIC is also involved in the custom assembly of special-purpose computer systems and the manufacture of certain high-technology products.

- Information services—including systems integration, professional services and systems operations (outsourcing)—are provided by SAIC to government and commercial clients. These services contributed an estimated $1.2 billion to SAIC's fiscal 1995 revenue.

Because SAIC believes its success is dependent upon its ability to attract and retain highly qualified scientists and other personnel, it offers many of its employees an opportunity for stock ownership in the company, either by direct purchase or through several stock option plans. Since the stock is not publicly traded, liquidity is provided by the internal market operated four times a year by Bull, Inc., a wholly owned broker/dealer subsidiary.

Operations and Structure

SAIC's emphasis is in the following four primary business areas:

- Technology Development and Analysis includes research, studies, experiments, analytical software development and application, exploratory design and development, and policy analysis. This kind of work assists SAIC's customers in establishing priorities, understanding engineering trade-offs, defining and evaluating programs and developing alternative solutions to important technical problems. SAIC provides leading experts in the physical sciences; engineering sciences; computer and mathematical sciences; chemical, biological, and health sciences; operations research; economics; and policy analysis to address these problems.

- System Development and Integration encompasses the design, development, engineering, and installation of integrated hardware and software systems. SAIC applies expertise in computer science, data acquisition, displays, sensors, communications, process control, simulators, signal processing, man-machine interfaces, logistics and training to provide turnkey systems, subsystems or prototype and related support to its customers.

- Technical Support Services include the skilled application of well-established technologies, management tools, software, laboratory procedures and testing services to government and industry, including laboratory analysis, data processing services, maintenance and operations of government-owned facilities and ranges, field test services, logistics and training support activities, and management support for major customer programs.

- Manufactured and Software Products include high-technology products that are fabricated or assembled in standard configurations, meet applicable quality assurance standards and are marketed as product lines. SAIC's current hardware products include military-hardened portable computers, advanced mil-spec display systems, workstations for training,

© INPUT 1995. Reproduction prohibited.

radiography instruments, and computer peripheral interfaces. SAIC also sells and licenses advanced software, including software development, maintenance and diagnostic tools; program management tools; and advanced applications packages.

SAIC continues to review the changing environment and reformat itself to become more organizationally efficient. The company's fiscal 1996 organization consists of 39 groups that have been aggregated into 12 sectors.

- The sectors principally address military science and technology, major federal and commercial technical agencies, hard sciences, communications and information, systems applications and design, energy, environment, health care, transportation, and manufacturing.

- In the SAIC organizational structure, operating divisions are assigned to operating groups. The SAIC operating divisions are the functional activities that perform the work, with each division being a center of expertise in a specific technology or specific type of work. Each of the operating divisions is assigned to an SAIC operating group for management, administrative and marketing support.

- The SAIC sectors and groups are each managed by an executive vice president or a senior vice president. These managers coordinate the technical work performed by their divisions and provide resources that have been centralized at their respective sector/group level. Because each sector/group manager has direct communications to all other group managers the resources of the entire corporation are only a telephone call away.

SAIC's organizational structure and capabilities are summarized in the exhibit that follows. The names of the SAIC operating groups reflect the general interests of most of the groups in science, engineering, environment, health, systems and technology. The specific interests of the groups extend well beyond their titles, however, for each SAIC group is a center of expertise for solving a specific set of problems.

SAIC has offices in more than 475 locations throughout the U.S. and in strategic locations overseas. Major SAIC office complexes/technology centers house computer centers; laboratories; word processing centers; art, illustration and reproduction centers; technical libraries; and administrative support services.

Key geographical locations are in Albuquerque, Arlington, Atlanta, Baltimore, Colorado Springs, Dayton, Falls Church, Golden (CO), Hampton (VA), Harrisburg, Houston, Huntsville, Indianapolis, Las Vegas, Los Angeles, McLean (VA), Oak Ridge (TN), Omaha, Orlando, Reston, Sacramento, San Antonio, San Diego, San Francisco, Santa Barbara, Seattle and Tucson.

International offices are in Australia, Canada, the Czech Republic, Colombia, France, Germany, Hong Kong, Iceland, Indonesia, Israel, Italy, Japan, Jordan, Korea, Mexico, New Zealand, the Philippines, Portugal, Russia, Saudi Arabia, Spain, Thailand, Turkey, the United Arab Emirates, the U.K., Venezuela and Vietnam.

© INPUT 1995. Reproduction prohibited.

Exhibit
SAIC Organization

Sector/Group	Sector/Group
Advanced Technology and Analysis Sector - Applied Technology Group Software Development and Maintenance Systems Engineering/Integration Simulation Studies and Analyses Threat Analysis Radar Systems Analysis Sensor Development Cost Analysis Management Information Systems Geographic Information Systems - Defense Analyses Group Sensors and Surveillance Technology Assessment Strategic Defense Systems Information Processing Simulation and Modeling Analytical and Technical Support Aerodynamics and Avionics - Defense Technology Group Nuclear Weapons Effects Military Systems Survivability Directed Energy Weapons Advanced Accelerator Technology Defense Conversion Nonproliferation Technology Electric Gun Technology - Technology Analysis and Applications Group Thermal Analysis and Simulation Hypersonic Technology Missile Systems Technology Nuclear Weapons Effects Process Reliability Technology Electro-Optics Intelligence Analysis Magnetic Fusion Technology Logistics Technology Probabilistic Risk Assessment - Test and Evaluation Group Test and Evaluation Operations and Maintenance Models and Simulations Electronic Combat/Warfare Joint Test and Evaluation SETA Support C3I Systems Analysis and Engineering	Logistics Planning Space and Space Defense Software Development Data Base Management (DBM) Security Accreditation Space Systems Development Model Development Test Support **Commercial Technology Sector** - Information Resources Group Information Technology Applications Development and Maintenance Systems Engineering Facilities Management - Real-Time Systems Group Real-Time Systems Integration Plant Monitoring Systems Leak Detection Services Security Systems (Commercial/Utilities) SCADA Systems (Gas and Oil) - Technology Development Group Radiation Monitoring Instrumentation Nondestructive Evaluation Instrumentation Visible/UV/IR Sensors and Systems Solar Collections Fuel Cells Advanced Composite Materials **Energy, Environment and Engineering Sector** - Energy and Environment Group Waste Management Environmental Compliance and Assessment Safeguards and Security Nuclear Weapons Production Support Risk Assessment/Analysis Nuclear Safety and Engineering Systems Power Plant Control Systems Quality Assurance Software Engineering Management Information Systems - Energy Systems Group Nuclear Facility Safety Regulatory Compliance Environmental Restoration Waste Management Emergency Management Technology Transfer and Development Information Systems and Services

© INPUT 1995. Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
DOE Headquarters Support Water Resource Management Land Use Planning - Engineering and Environmental Compliance Group Hazardous and Radioactive Waste Management Environmental Regulatory Compliance Environmental Assessment and Analysis Education/Communication/Outreach Programs Environmental Remediation/Restoration Risk/Health Assessment Regulatory Compliance Training Environmental Quality Assurance Decontamination and Decommissioning Environmental Data Management - Environmental and Health Sciences Group Occupational Health and Safety Pollution Prevention Environmental Studies and Analyses Regulatory Development Support Scientific Applications International Environmental Programs Health Studies and Counseling Environmental Engineering Aquatic Sciences - R.E. Wright Environmental Group **Information and Technology Systems Sector** - COMSYSTEMS Group Software Reengineering Intelligence Systems Program Management Support ADP Systems C3I Communications Networking Key Distribution Systems Security Engineering Automated Diagnostics Control & Monitoring of Automated Systems Secure (MLS) Development Operations Support System Command & Control Systems Independent Verification & Validation (IV&V) Data Base Systems Secure Video Teleconferencing Multimedia Office Automation Management Information Systems Telecommunications Computer-Based Training (CBT) Mentor/Protege Programs	- Engineering Systems Group Antisubmarine Warfare Undersea Surveillance Quality Management Technical Analysis/Development Engineering Services Systems Development/Integration Communications Systems Software Engineering ADP/Automated Systems Support/Training Networks (LAN/WAN) - Software and Systems Integration Group Large Systems Integration Projects Ada Technology Software Design and Development Health Information Systems Undersea Warfare Systems Analysis Operational Survivability Evaluations C3I Systems Development and Integration Cover, Concealment and Deception International Systems Integration Projects Information Engineering Law Enforcement Information Systems **Maritime Technology Sector** - Maritime Engineering Group C3I/C4I Maritime Engineering and Technical Services Survey and Data Collection Systems Development Underwater Acoustics Coastal and Harbor Defense Deployment and Surveillance Systems Electro-Optics Submarine Technology Support Physical Security Systems - Maritime Sciences Group Undersea Acoustic Ranges Coastal and Harbor Defense Precision Marine Navigation/Survey Ocean Engineering Maritime Surveillance/Tactical Antisub Warfare Physical Oceanography and Ocean Studies Marine Environmental Monitoring and Technology Expert Computer System Design/Development Advanced Seismology/Geophysical Technologies Electro-Optics/Fiber-Optics Systems and Sensors

© INPUT 1995. Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
Science and Engineering Sector - AMSEC Maintenance Engineering/Field Service Support In-Service Engineering Integrated Logistics Support Technical Documentation/Computer-Aided Design Instructional Systems Development Training Command and Control/Combat Systems Support Electronic and Environmental Services Utility Industry Support Port Engineer Services Industrial Training Computer-Aided Logistics Support Metrology Engineering - Engineering Logistics and Information Systems Logistics Management and Support Services Logistics Information Systems Logistics Support Systems Engineering Technical Assistance Information Engineering Engineering, Design and Development Simulation and Simulation Modeling Software Support Environments Avionics Support Engineering Technology Transfer Mission/Utility Analyses Training Simulators/Systems - Major Programs Group Chemical Demilitarization Nuclear Waste Management Nuclear Quality Assurance Geotechnical/Engineering Support Services Health/Safety Protection Management Systems Performance-Based Training Major Programs Management Biomedical Modeling Biomedical Sciences Environmental Monitoring and Compliance **Studies and Systems Sector** - Information Systems and Technology Group Communications Networking Software Engineering/Development/CASE Tools Data Base Management Battle Management C3 Mission Planning/Decision Support Management Information Systems Engineering SATCOM Engineering Communications and Systems Engineering/Integr.	Network LAN Systems Development Space Technology - National Security Studies and Strategy Group Political Military/Regional Analysis Arms Control/Treaty Verification Cost and Economic Analysis Human Performance Technology Program Management Support Planning and Operations Weapon Systems Analysis Foreign Threat and Technology Assessment Strategic Organizational Planning/Development Technology Evaluation/Application - Systems Technology Group Systems Integration Records Management Facilities Management Software Development/Reengineering Corrections Civil Aviation Human Factors Engineering Information Security Engineering Information Systems Signal Analysis & Processing Surface & Air Weapons Systems Engineering/Technical Assistance **Systems Technology and Integration Sector** - Advanced Technology Products Group Mobile Workstations Networks Flat Display Systems - Computer Systems Group Systems Integration Systems Engineering Product Development Ada Software Development Military Tactical Protocols - Health Care Technology Group Health Information Systems Telemedicine Systems Advanced Workstation Systems Man-Machine Interface Development Medical Transaction Systems Systems Integration, Design, Development and O&M Services - Range Systems Group Ruggedized Hand-held Computers Computer Notebooks Ruggedized Laptop Computers

© INPUT 1995. Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
Ruggedized Portable Displays Ruggedized Display Monitors and Terminals Ruggedized Workstations - SAIT **Technology and Advanced Systems Sector** - Applied Systems Group Intelligence Systems Tactical Data Systems Software Engineering System Development/Integration - Space and Defense Group Acquisition and Program Management Support Space Systems Simulations, Engineering, Design and Integration Threat, Survivability and Countermeasures NUET, Plume, Sensor Phenomenologies C4I Simulation, Development, Wargaming Space Surveillance & Weapon Systems Analysis, Technology, Experiments and Operations Information Systems Full Life-Cycle Software Development/Integration Spacecraft Design, Modeling, Performance Eval. Launch Range Support - Technology Research Group Hydrodynamics and Ship Design Signal and Data Processing Synthetic Aperture Radar Computational Fluid Dynamics Signature Management Radar and Electro-Optics Sensor Analysis Air Defense System Design Image Processing and Analysis Mapping, Charting and Geodesy Distributed Simulation Technology **Technology Applications Sector** - Asset Group Simulation-Based Training Semi-Automated Forces Development Software Technology Software Reuse and Reengineering Ada CASE Tools Ada Software Development Software Process Improvement Transportation Systems Software Conversion/Migration Command and Control Systems Digital Library Service World Wide Web Support	Information Technologies/Systems - Technology Applications Group Training Manufacturing Technology Video Teleconferencing Intelligence Systems Integration Reverse Engineering (Hardware and Software) Office Automation Multimedia Process/Productivity Improvement WAN/LAN Networking - Telecommunications Technology Group Telecommunications Engineering/IT LAN/WAN/FDDI Designs Network Integration RF Communications Technology/Electronics Site Survey and Installation Automation Systems Development Computer-Based Training Systems Multimedia Training Client/Server Data Base Design Office Automation Systems Compact Disk & Optical Systems Open Systems/Client Servers CD Authoring Data Base Design Satellite Communications Engineering Information Technology Intelligence Building Design Systems Engineering IVHS Transportation Systems Analysis & Design Multimedia Document Management Multimedia Networking Network Solutions **Technology Solutions Sector** - Systems Engineering/Integration - Imaging and OCR Systems - Networking/Information Security - Intelligence Systems - Commercial Information Systems - Environmental Information Management - CALS Systems Development - Energy Modeling and Analysis - Electronic Data Interchange/Records Mgmt. - Safeguards and Security

© INPUT 1995. Reproduction prohibited.

Exhibit (cont.)

Sector/Group	Sector/Group
Transportation Sector - JHK & Associates: Transportation Planning, Traffic Engineering, Systems Engineering - Syntonic: Electronic Toll and Traffic Management Systems, Rail, Intelligent Vehicle Highway Systems, Communications	**Space, Earth & Atmospheric Sciences Group** (Independent Group)

SAIC's (active) subsidiaries and joint ventures include the following:

- American Systems Engineering Corp. (Virginia Beach, VA) provides ship overhauls, instructional software and design services, and operations and maintenance support services for the U.S. Navy.
- Bull, Inc. is a broker/dealer subsidiary that operates the limited market for SAIC stock.
- Campus Point Realty Corporation (San Diego, CA) is a real estate subsidiary that holds title to various real estate used by SAIC in its operations.
- Environmental Restoration Systems, Inc. (Middletown, PA) is a wholly owned subsidiary of R.E. Wright Environmental, Inc. that fabricates and supplies hazardous waste remediation equipment.
- General Sciences Corporation (Laurel, MD) provides information analysis, scientific research, and application systems development services in the areas of global change, astronomy, meteorological and oceanography research and global circulation modeling.
- Hicks & Associates, Inc. (McLean, VA) is a consulting firm offering services in proposal development, strategic planning, technical problem solving and advice on mergers, acquisitions and executive searches.
- JHK & Associates, Inc. (Emeryville, CA), acquired in January 1994, provides transportation planning and systems engineering to private and public sectors, with expertise in multimodal transportation, intelligent transportation systems and traffic engineering and design.
- JMD Development Corporation dba JDA (San Francisco, CA) provides health care information systems consulting and integration services to commercial health care providers.
- Network Solutions, Inc. (Herndon, VA), acquired in May 1995, is a network integration subsidiary that specializes in the Internet, interoperability and network management. Services include requirements analysis, design, installation, operation, maintenance and consulting.
- Pathology Associates International Corporation (Frederick, MD), acquired in June 1995, provides preclinical biomedical product development, health effects assessment studies and related biomedical research support services.
- R.E. Wright Environmental, Inc. (Middletown, PA), acquired in January

© INPUT 1995. Reproduction prohibited.

1995, provides environmental engineering and construction management services for environmental problems.

- SAIC Commercial Enterprises, Inc. (San Diego, CA) provides commercial marketing of company-developed technology.
- SAIC Engineering, Inc. (Middleboro, MA) performs environmental and remediation studies, civil engineering and surveys.
- SAIC Global Technology Corporation (San Diego, CA) performs research, development and support services in environmental remediation/protection programs and identifies technology conversion opportunities.
- Science Applications International Technology (SAIT) provides computers and display systems to the U.S. Department of Defense as well as nonmilitary customers.
- Syntonic Technology, Inc. (Harrisburg, PA), acquired in early 1995, focuses on systems integration of electronic toll collection systems and traffic management and communications systems.
- Systems Control Technology, Inc. (Palo Alto, CA) provides software development and systems integration.
- Wright Laboratory Services, Inc. (Middletown, PA) provides laboratory services.

In November 1995, SAIC agreed to purchase, along with existing management and employees, a majority interest in two European telecommunications software companies from GSI of Paris.

- One company is Tecsi, a Paris-based supplier of telecommunications systems, software and systems integration services. Tecsi, with annual revenues of $37 million and 250 employees, will be 70% owned by SAIC and 30% owned by France Telecom.
- The second company, Danet, also supplies telecommunications systems, software and systems integration services. Located in Darmstadt (Germany), Danet has $40 million in annual revenue and 300 employees. It will be 70% owned by SAIC and 30% owned by Deutsche Telkom.

Company Strategy

SAIC's mission statement is:

"SAIC is a company of people dedicated to delivering best-value services and solutions based on innovative applications of science and technology."

Financials

SAIC's fiscal 1995 revenue exceeded $1.92 billion, a 15% increase over fiscal 1994 revenue of $1.67 billion. Net income rose 18%, from $41.5 million in fiscal 1994 to $49.1 million in fiscal 1995. A five-year financial summary follows:

© INPUT 1995. Reproduction prohibited.

Science Applications International Corporation
Five-Year Financial Summary
($ Millions, except per share data)

Item	Fiscal Year 1/95	1/94	1/93	1/92	1/91
Revenue	$1,921.9	$1,670.9	$1,504.1	$1,285.3	$1,162.9
• Percent change from previous year	15%	11%	17%	11%	14%
Income before taxes	$79.7	$69.8	$60.1	$55.6	$54.0
• Percent change from previous year	14%	16%	8%	3%	13%
Net income	$49.1	$41.5	$38.1	$33.6	$33.3
• Percent change from previous year	18%	9%	13%	1%	8%
Earnings per share	$1.01	$0.89	$0.83	$0.75	$0.73
• Percent change from previous year	13%	7%	11%	3%	9%

Revenue Analysis by Product/Service

It is estimated that approximately $1.2 billion (65%) of SAIC's fiscal 1995 revenue was derived from information services-related activities, segmented approximately as follows:

Systems integration	80%
Professional services	10%
Outsourcing services	10%
	100%

SAIC's operations are classified into two broad segments—Technical Services and Products. The Technical Services segment is further classified into the National Security, Environment, Energy and Other business areas. Other business areas include health, space, transportation and commercial information technology.

- Technical Services consist of applied and basic research; analysis and development of new and existing policies, concepts, systems and programs; design and development of computer software; systems engineering; systems integration; test and evaluation of new products or systems; technical operational and management support; environmental engineering; and engineering support to existing facilities, laboratories and systems.

- Products include custom-designed and standard hardware and software products such as data display devices, "ruggedized" personal computers, sensors and nondestructive imaging instruments. These products typically incorporate SAIC-developed hardware and software, as well as hardware and software manufactured by others.

A three-year summary of source of revenue by business segment follows:

© INPUT 1995. Reproduction prohibited.

Science Applications International Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1/95		1/94		1/93	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Technical Services						
- National Security	$891.2	46%	$830.6	50%	$764.3	51%
- Environment	264.5	14%	253.9	15%	226.0	15%
- Energy	169.7	9%	156.7	9%	157.3	10%
- Other (a)	423.4	22%	287.6	17%	239.9	16%
Products	171.2	9%	140.8	8%	116.3	8%
Interest income	1.9	--	1.3	--	0.3	--
Total (a)	$1,921.9	100%	$1,670.9	100%	$1,504.1	100%

(a) Includes health care, space, transportation and commercial information technology.

(b) Differences due to rounding.

Although National Security revenues have declined as a percent of total revenues, these revenues increased 7% in fiscal 1995, 9% in fiscal 1994 and 13% in fiscal 1993 over the prior year, in spite of declines in the overall defense market during these periods. The U.S. government maintained funding in areas in which SAIC has strong capabilities, such as research and development, training, simulation and test and evaluation.

Revenues in the Environment business area decreased slightly as a percent of total revenue and Energy revenues have remained constant at 9% of total revenues.

Other Technical Services revenues have increased 47% during fiscal 1995 and 20% during fiscal 1994, reflecting the company's expansion into the health, transportation and commercial information technology markets and mirrors the country's shift of priorities and resources from defense programs to civilian programs in areas such as health care and transportation.

The mix of contracts for fiscal 1995 consisted of 50% cost reimbursement, 21% time and materials and firm fixed-price level-of-effort, and 29% firm fixed-price.

Revenues for fiscal 1996 are expected to exceed $2 billion.

Market Financials

Revenue from the U.S. government, either as a prime contractor or subcontractor, accounted for 86% ($1.65 billion) of SAIC's total revenue in fiscal 1995, compared to 88% ($1.47 billion) of total revenue in fiscal 1994 and 88% ($1.32 billion) of total revenue in fiscal 1993.

The remainder of SAIC's revenue ($270 million in fiscal 1995, $200 million in fiscal 1994 and $180 million in fiscal 1993) was

© INPUT 1995. Reproduction prohibited.

derived from state and local government and commercial clients.

SAIC's principal markets include national security, energy, environment, health, space, transportation and information technology.

Geographic Markets

Virtually all of SAIC's revenue is derived from sales to U.S. customers.

Employees

SAIC's employees are segmented approximately as follows:

Technical/professional	76%
Managerial	13%
Administrative professional	11%
	100%

As of October 1995, SAIC had 20,576 employees, including 500 overseas employees, counting both nationals and expatriates. SAIC's Sector employees (excluding corporate staff and subsidiaries) are aligned as follows:

Advanced Technology & Analysis	1,744
Commercial Technology	486
Energy, Environment & Eng.	2,266
Information & Technology Sys.	1,048
Maritime Technology	581
Science and Engineering	1,426
Studies and Systems	1,033
Systems Technology & Integration	1,983
Technology Applications	1,208
Technology & Advanced Systems	1,286
Technology Solutions	1,339
Transportation	713
Space, Earth & Atmospheric Sciences Group	450

Key Products and Services

This section will focus on the information services provided by SAIC, which are offered through most of SAIC's Sectors.

SAIC's systems integration services include analysis/requirements, design, development, installation/testing and maintenance/support.

The company's expertise in database management includes database integration, data navigation and mining, database creation/maintenance, extensive Oracle experience, graphical user interfaces, interactive kiosks, pen-based systems and algorithms/numerics.

SAIC's experience in computer software has included top-level structure; systems architecture, and network designs for major software packages; systems analysis, programming, compiling and debugging; verification and validation of software developed by SAIC and other firms; software maintenance and conversion or upgrading of software; use of CASE tools; personnel training in software development and maintenance; and systems engineering and technical assistance.

SAIC computer security specialists have experience in penetration analysis and evaluation; vulnerability analysis and evaluation; security risk assessment; secure system design, implementation and installation; security engineering and trusted software development; contingency planning; security testing; and accreditation.

SAIC's mainframe-to-client/server migration expertise includes migration strategies, extensive software development migration experience, client/server engineering, LAN performance tuning, LAN management,

© INPUT 1995. Reproduction prohibited.

network security and Lotus Notes engineering experience.

SAIC is versed in a range of programming languages, database management systems, networks and communications environments, and hardware and operating platforms.

SAIC's information services-related activities are summarized below:

Information Technology

SAIC offers a range of information technology services, including consulting, systems integration and outsourcing services. The company's expertise includes open systems, client/server architectures, networks and software development.

SAIC was selected by British Petroleum Exploration (BPX) as one of three companies to be worldwide partners in outsourcing BPX's computer facilities and applications. SAIC manages BPX's European applications and runs its computer operations in Aberdeen (Scotland). SAIC also migrated BPX systems from proprietary environments to client/server architectures.

Other project examples include the following:

- Providing consulting to the Florida Department of Labor in the area of electronic document management in processing workers' compensation and dispute resolution cases
- Developing a business-based information protection plan for one of the world's largest insurance companies
- Preparing an information crisis management plan for one of the world's largest brokerage firms
- Assisting Sun Federal to develop a secure operating system for the Sun workstation family that complies with Defense Intelligence Agency secure computing requirements
- Assisting the U.S. Patent and Trademark Office to automate the processing of patent and trademark applications
- Designing modular physical security systems for large facilities and airports, including J.C. Penney and airports in Anchorage, Boise, Brussels, Denver, Honolulu, Memphis, New York, Orange County and San Diego

Health Care

SAIC provides integrated systems to private sector and government hospitals and clinics for computerized patient records, integrated delivery systems, outcomes management, enterprise-wide telecommunications and legacy system upgrades.

For the Department of Defense, SAIC designed and built the Composite Health Care System (CHCS)—the largest health care information system in the world. CHCS, deployed at 550 DoD medical sites, connects departments, wards and outlying clinics, integrating their information with computerized patient files.

In March 1995, SAIC was awarded a $235 million contract by the DoD (Defense Medical Information System/System Integration, Design, Development, Operation, Management System). SAIC will assist in the selection, use, development and application of hardware and software technologies to meet current and future military health care information system requirements, including the operation and maintenance of software and data collection functions.

© INPUT 1995. Reproduction prohibited.

In early 1995, SAIC was awarded a contract with the DoD to build community networks linking military medical facilities (using CHCS) with civilian providers and VA medical centers.

For the Department of Veterans Affairs, SAIC designed and is integrating and operating a multimillion-dollar telecommunications network to link more than 375 sites, including medical centers, clinics, benefits offices and data processing offices in all 50 states, Puerto Rico and the Philippines.

In May 1995, SAIC was selected to help Kaiser Permanente build its next-generation computing and network infrastructure to support the HMO's clinical and business operations.

For the Harris Methodist Health Services Group in Fort Worth (TX), SAIC has supplied a clinical workstation toolset that supports sharing of patient and business information.

SAIC is automating clinical systems in AtlantiCare (New Jersey) hospitals, clinics and physicians' offices.

SAIC's JDA subsidiary provides information systems consulting and integration services to commercial health care institutions.

National Security

SAIC has supported the military with systems for command and control, advanced simulation, information management, logistics and planning applications.

Recent examples of SAIC's work for the federal government are summarized as follows:

- In October 1995, SAIC was awarded a $28 million contract to support the Space and Naval Warfare Systems. SAIC will integrate computers and software to implement an electronic key management system for automatic communications security.

- In October 1995, SAIC was awarded an indefinite delivery, indefinite quantity contract to provide software support services to the Army Information Systems Software Command. SAIC will provide communications software design and analysis and software development, testing, maintenance, extension and installation services.

- In August 1995, SAIC was awarded a five-year contract worth up to $200 million to provide information systems support to the Internal Revenue Service.

- In July 1995, SAIC was among those awarded a contract from the Defense Information Systems Agency to provide information systems security services and products to various government agencies. SAIC's portion of the contract is estimated at $300 million.

- In January 1995, SAIC was selected as part of the Hewlett-Packard team to support the Navy's TAC-4 program. SAIC will provide systems integration, rugged versions of HP workstations and systems engineering services. SAIC's potential portion of the contract will be up to $160 million.

- In January 1995, SAIC was chosen as a subcontractor to TRW for the Army's Force Battle Command Brigade and Below program. SAIC will provide commercial and ruggedized computers, communications interface hardware,

© INPUT 1995. Reproduction prohibited.

software development and supporting integration services. SAIC's portion of the contract is $35 million.

- The Defense Information Systems Agency selected SAIC to integrate the Global Command and Control System (GCCS) to support the commanders-in-chief of the unified commands. GCCS is a global command, control, communications, computer and intelligence system that will directly link and support combat troops for all U.S. armed services.
- In December 1994, SAIC, with Lockheed Martin, won a contract to build the main U.S. Army command and control system (Army GCCS).
- The U.S. Navy has contracted with SAIC to improve network protocols used for TCP/IP and ATM networks in support of the 1997 Synthetic Theater of War demonstration.
- SAIC completed a major architectural design of core simulation software (SIMCORE) for the ARPA's War Breaker program.
- SAIC is supporting the DoD's renovation of the Pentagon, creating an enterprise network of shared communications and computing services. This work is part of a major five-year, follow-on contract awarded in 1994 by the U.S. Army Information Systems Engineering Command.
- SAIC has supported the Software Engineering Directorate at the U.S. Army Missile Command to upgrade the software skills of its staff.

SAIC has performed a range of database management work for the federal government, including:

- The design, development and maintenance of a geophysical database as part of the U.S. Air Force's UMBRELLA program
- Implementing a complete system for the Department of Energy's Energy Information Administration (EIA) that tracks all projects and deliverables produced by EIA
- Developing a complete system for tracking all research sponsored by the Department of Energy
- Developing and operating an on-line system for tracking all nonclassified shipments of nuclear material by the Department of Energy
- Systems engineering support for two of the largest text database applications in the world—one for the U.S. Patent and Trademark Office and the other for a major intelligence community customer

Law Enforcement

SAIC integrated the first automated fingerprint identification system for the FBI. This system is now designed to serve 60,000 local, state and federal law enforcement agencies.

In early 1995, SAIC was awarded a $27.6 million contract by the FBI to build the Interstate Identification Index—a national criminal history system. SAIC will migrate an old mainframe-based system to a client/server architecture.

SAIC has designed and implemented the Joint Maritime Information Element to be employed in the war on drugs. This system

© INPUT 1995. Reproduction prohibited.

provides a classified communications network for sharing data between the U.S. Coast Guard, the Justice Department Drug Enforcement Agency, the Customs Service and 11 other agencies.

For the Georgia Department of Corrections, SAIC is designing an image-based electronic file system to manage offender records.

For the New York Police Department, SAIC is integrating a distributed booking system that will allow the city to redeploy 300 officers from office duties to the field.

Environment

During 1994, SAIC helped the EPA integrate a variety of legacy systems into one uniform multimedia system that simultaneously manages air, water and hazardous waste data.

SAIC assisted the EPA in developing the Pollution Prevention Information Exchange System (PIES), which provides 24-hour, free access to multimedia technical and program information on pollution prevention alternatives.

SAIC led a multiagency effort to combine databases on pollution prevention associated with solvents into one data base linked to PIES.

Geospatial Information

For the National Oceanic and Atmospheric Administration, SAIC transferred technology used in the Defense Mapping Agency to create digital map displays for the National Weather Service.

For the U.S. Geological Survey, SAIC used DoD mapping technology to create the next generation of topographic maps.

Energy

SAIC offers plant monitoring, security and supervisory control and data acquisition systems for the utility industry.

During 1994, SAIC was awarded a contract with Duke Power Company—one of the largest contracts to date to replace plant process computers in the nuclear utility industry.

Pennsylvania Power & Light has chosen SAIC to replace existing process monitoring computer systems at its Susquehanna plant.

During 1994, SAIC installed a real-time risk management system for the Dukovany Plant in the Czech Republic.

Other energy clients include Taiwan Power Company, Entergy Corporation, Tennessee Valley Authority, Carolina Power & Light, American Electric Power, Pittsburgh Energy Technology Center and San Diego Gas & Electric.

Transportation

SAIC provides a range of services and customized systems to ground, water and air transportation customers worldwide.

SAIC was one of the nation's first companies to apply radio frequency identification technology to the transportation industry. SAIC-developed systems now automatically track cars, buses, trucks, airplanes and the cargo they contain.

- One of SAIC's fastest growing business areas is automatic equipment identification (AEI) systems for railroad companies. SAIC is providing AEI systems for the Houston Belt & Terminal Railway Company and the Canadia Pacific Rail System.

© INPUT 1995. Reproduction prohibited.

- Expanding into other markets, such as intermodal yard management and ports, SAIC recently installed low-speed AEI systems for the in/out gates at two major Union Pacific intermodal yards.

SAIC also supplies electronic toll and traffic management systems to a range of state and local government agencies.

- SAIC has installed the I-PASS system for electronic toll collection on Chicago's North-South Tollway and in highway and/or bridge toll booths in California, Florida, Northern Virginia, and Massachusetts.

- SAIC has developed an electronic transportation management system using an automatic vehicle identification system to monitor the inter-terminal and long-term parking lot bus services for the Port Authority of New York and New Jersey's JFK International Airport.

For J.B. Hunt, the second largest trucking company in North America, SAIC integrated a dispatch, monitoring and control system for touch-screen tablet computers. Truck drivers can use the mobile computers to communicate directly with dispatchers.

In the area of aviation, SAIC provides a range of professional and systems integration services:

- SAIC continues to support Loral with air traffic control software for the U.S. and other countries.

- SAIC is integrating critical aeronautical information from a range of National Airspace System resources into a single system to help the FAA expedite air traffic flow.

- Building on work for the Denver International Airport, SAIC developed the concept for an integrated airport ground-side operating system, linking major airport information systems to a common technology core and supporting real-time management of airport operations.

The TravTek project, to be demonstrated in Orlando (FL), will provide traffic information, motorist services information, tourist information and route guidance to operators of 100 test vehicles equipped with TravTek devices.

Amtrak awarded SAIC a worldwide marketing license for its computer-aided train dispatching system. With this agreement, SAIC can provide any transit or railroad company with a customized system for improving traffic flow and safety.

Marketing and Sales

SAIC Corporate Development has 12 full-time market development personnel.

Although it varies over time, on average the SAIC Sectors have about 200 people directly assigned to market development.

In addition, SAIC has arrangements with outside consultants to assist in marketing specific opportunities. However, as an employee-owned company, most of SAIC's employees "market" their services through market development on existing contract engagements.

Alliances

SAIC has alliances/marketing agreements with a range of vendors, including the following:

- Sybase (health care and oil and gas markets)

© INPUT 1995. Reproduction prohibited.

- Symmetrix (banking and insurance markets)
- HBO & Company (health care)
- Amtrak (rail transportation)

Competitors

SAIC's major competitors for information services-related contracts include Computer Sciences Corporation, PRC and EDS.

Assessment

SAIC's strengths in the information services arena include:

- Significant experience in systems integration projects for the federal government since 1969
- Expansion of offices in international markets
- A network of strategic office locations near its major customers to facilitate communications

Challenges over the coming year include:

- Increasing market share in a declining federal and defense market
- Adjusting to the acquisition reform initiatives of the Clinton administration and Congress
- Increasing market share in the company's commercial and international business areas

© INPUT 1995. Reproduction prohibited.

SCIENCE DYNAMICS CORPORATION
2140 West 190th Street
Torrance, CA 90504
(213) 320-1101

Santo Panzarella, President
Private Corporation
Total Employees: 200
Total Revenue, Fiscal Year End
1/31/84: $18,000,000

THE COMPANY

- Science Dynamics Corporation (SDC), founded in 1969, provides processing services and turnkey systems to the medical industry.

- Fiscal 1984 revenue reached $18 million, a 6.3% increase over the fiscal 1983 revenue of $17 million. A five-year revenue summary follows:

SCIENCE DYNAMICS CORPORATION
FIVE-YEAR REVENUE SUMMARY
($ thousands)

ITEM \ FISCAL YEAR	1/84	1/83	1/82	1/81	1/80
Revenue	$18,000	$17,000	$16,000	$15,000	$11,300
. Percent increase from previous year	6%	6%	7%	33%	40%

- SDC's Hospital Division was formed in July 1983 to provide systems to hospitals. Although major program development for this division has commenced, management does not anticipate any product releases until early 1985.

- In November 1983 SDC sold to EDS its Municipal Data Systems division, which provides processing services to 12 Southern California municipalities. This divestiture is still in the final "phase-out" stage.

- As of January 1984 SDC had 200 employees segmented as follows:

Marketing/sales	15
Software support	75
Network control center	25
Computer operations	50
General and administrative	35
	200

© 1984 by INPUT. Reproduction Prohibited.

- Major SDC competitors include CyCare, IDS, and Management Systems of Wausau.

KEY PRODUCTS AND SERVICES

- One hundred percent of SDC's fiscal 1984 revenue was derived from remote computing services provided to over 275 clients that represent 25,000 physicians in groups, clinics, and medical schools.

- SDC offers processing services on its SPECTRUM 600 Computer System, a distributed system linking an in-house Intel 8086 computer with the SDC data center. Data bases and major files are maintained at SDC's data center and are accessed via a dedicated high-speed communications network.

 - The modular, menu-driven system offers high-speed data collection and retrieval, patient registration, scheduling, and report printing. The system supports up to 48 CRTs. Major software applications include:

 . Patient registration.
 . Patient billing.
 . Demand billing.
 . Accounts receivable reporting.
 . Insurance processing (including tape-to-tape processing).
 . Collection management systems.
 . Patient appointment scheduling.
 . General ledger.
 . Accounts payable.
 . Prepaid/HMO systems.
 . Management exception reporting.
 . Resource utilization reporting.
 . Report generation/ad hoc reporting.
 . Booked appointment systems.
 . Revenue distribution systems.
 . Patient reminder/recall.
 . Open claims tracking systems.
 . Word processing.
 . Diagnosis study programs.
 . Electronic mail.

 - SDC's data base approach to programming the software allows users to design reports and extract information according to individual needs.

 - SDC provides services and maintenance assistance, including remote diagnostics, software enhancement and conversion, tape backup, and a technical hotline service for SPECTRUM 600 clients.

 - The SPECTRUM 600 runs on Intel equipment under RMX86. An optional interface is available on an IBM PC-based workstation for use as either a personal computer or an entry/retrieval CRT.

© 1984 by INPUT. Reproduction Prohibited.

- SDC's SPECTRUM 600E, released in January 1984, is an enhanced version of the SPECTRUM 600. Features include on-site file storage and on-line real-time registration and editing.

- SDC's SPECTRUM 700 System, planned for shipment in early 1984, is an interactive turnkey system that provides office automation applications for physicians' offices, medical groups, clinics, medical schools, and HMOs.

 - Through an SDC-developed local-area network, the system interfaces an on-site file manager Intel 8086 computer with IBM PC-based workstations. Each full-function workstation may be used independently for a wide variety of tasks and can communicate with other workstations. Workstations can also share system resources such as data files, word processing text, printers, and mass storage devices.

 - The system uses specialized function keys that replace multiple operator keystrokes, English commands, interactive error detection techniques, "help" instructions, and a computer-assisted training course.

 - Application options available include:

 . Patient appointment scheduling.
 . Revenue distribution systems.
 . Open-item or balance-forward accounting.
 . Report generation.
 . Word processing.
 . Financial systems (general ledger, accounts payable, payroll).
 . Budgeting and forecasting.
 . Electronic spreadsheet.
 . Prepaid, HMO membership, Utilization, and Eligibility modules.
 . Diagnosis/demographic study programs.
 . Patient billing and accounts receivable.
 . Demand billing.
 . Insurance processing (including electronic claim submission).
 . Open claims tracking.
 . Collection management modules.
 . Over 1,000 personal computer applications programs.

 - Spectrum 700's MAGIX$^{T.M.}$ software allows users without programming experience to customize and modify programs. Entry and display screens can be easily reformatted and output reports and forms can be modified.

 - Built-in security measures, audit trails, and system password controls ensure information security.

 . SDC has future plans to sell MAGIX, an applications development tool and operating system, to distributors, OEMs, and software houses.

© 1984 by INPUT. Reproduction Prohibited.

- The SPECTRUM 700 may be linked to the SDC Network to access additional software and data bases and for data backup and linkage to satellite offices.

- There is currently a $3 million backlog representing 41 SPECTRUM 700 systems. SDC management anticipates revenue from the system to reach $10 million by the end of fiscal 1985.

- Pricing for the SPECTRUM 700 ranges from between $25,000 and $300,000.

- SDC's SPECTRUM 516 Computer System, formerly the SPECTRUM 500, is the entry level for interactive processing. The data base and major files are maintained at the SDC data center and are accessed via an SDC-dedicated high-speed communication network. Up to 24 CRTs can be supported. Key applications offered on the network include:

 . Patient registration, patient appointment scheduling, patient billing, insurance processing, insurance proration, suspended claims processing, open claims tracking, collection management, word processing, general ledger, accounts payable, payroll, and appointment booking.

 . Future planned applications will include various patient-care-oriented programs such as multiphasic screening and medical records subsystems.

- SDC is a systems integrator for the SPECTRUM line. The processor is an Intel 8086 computer using an Intel OS Chip System.

INDUSTRY MARKETS

- SDC's fiscal 1984 revenue was derived approximately as follows:

Medical clinics and physicians	40%
HMOs	20
Medical schools	40
	100%

GEOGRAPHIC MARKETS

- One hundred percent of SDC's fiscal 1984 revenue was derived from the U.S.

- Sales/branch offices are located in Atlanta, Chicago, Dallas, and Mountain View (CA).

© 1984 by INPUT. Reproduction Prohibited.

COMPUTER HARDWARE AND SOFTWARE

- SDC has one data center in Torrance where it maintains a nationwide communications network to service its clients throughout the U.S. SDC currently maintains one Honeywell Level 6 operating under CP/6.
- Network access is via point to point. The network serves all major cities.

© 1984 by INPUT. Reproduction Prohibited.

Acquired by McDonnell Douglas

COMPANY HIGHLIGHT

SCIENCE DYNAMICS CORPORATION
2140 W. 190th Street
Torrance, CA 90504
(213) 320-1101
(800) 421-2181

Santo Panzarella, President
Private Corporation
Total Employees: 200
Total Revenues, Fiscal Year End
1/30/81: $15,000,000

PRINCIPAL BUSINESS Since 1969, Science Dynamics Corporation (SDC) has provided medical data processing services.

FINANCIALS

	1/81	1/80	1/79	1/78	1/77
			($ thousands)		
- Total revenues	$15,000	$11,300	$8,100	$6,000	$4,300

. SDC management expects 1982 revenues to increase to $20 million in continuance of its 35% average annual growth rate.

SOURCES OF REVENUE

- 90% Interactive processing.
- 10% Turnkey systems.

NEW VENTURE

- In 1980, SDC created a new division called Municipal Data Systems. This division provides processing services for 12 Southern California municipalities.

 . In 1970, 12 Southern California cities formed a consortium for their data processing services. The original applications include accounts payable, accounts receivable, general ledger, utility billing, payroll/personnel and business licenses. SDC rewrote most of the applications in COBOL and is adding applications for library management and public safety.

- The primary focus of SDC's business will remain on medical data processing.

PRODUCTS AND SERVICES

- Science Dynamics provides services to approximately 325 clients which include over 18,000 physicians in groups, clinics and medical schools. Several options for medical data processing are available through the SDC Spectrum Series.

©1981 by INPUT. Reproduction Prohibited.

- SDC Spectrum Series 500 is the entry level for interactive processing. The data base and major files are maintained at the SDC Data Center and are accessed via an SDC dedicated high-speed communications network. Up to 24 CRTs can be supported. Key applications offered on the network include:

 . Patient registration, patient appointment scheduling system, patient billing, insurance processing, insurance proration, suspended claims processing, open claims tracking, collection management, word processing, general ledger, accounts payable, payroll and appointment booking.

 . Future planned applications will include various patient care oriented programs such as multi-phasic screening and medical records subsystems.

- SDC Spectrum Series 600 allows for in-house creation of client files and processing for a combination standalone/network system. Patient statement generation and mailing are accomplished either at the SDC Data Center or at the client facility. All the applications available on the SDC Spectrum 500 are offered on the SDC Spectrum 600. In addition, specialized applications (for example, diagnostic studies and property management systems) are available on the SDC Spectrum 600. The SDC Spectrum 600 supports up to 64 CRTs.

- SDC Spectrum Series 700 is SDC's turnkey system for medical processing and business applications. The applications available on the SDC Spectrum 700 are identical to those on the SDC Spectrum 600, but all operate exclusively in a standalone mode. Up to 128 CRTs can be supported by the SDC Spectrum 700.

- SDC is a systems' integrator for the Spectrum line. The processor is an Intel computer using an Intel OS Chip System. Price of the Spectrum Series ranges from $30,000 to $400,000.

- Science Dynamics also markets its Spectrum software for use on large systems including IBM 370 and 4300s and Honeywell Level 66s. There are as yet no installations of the software.

INDUSTRY MARKETS Ninety-five percent of SDC's business stems from the medical industry and five percent from local municipalities.

GEOGRAPHIC MARKETS One hundred percent of SDC's clients are located in the U.S. SDC services clients from regional sales and services offices throughout the U.S.

COMPUTER HARDWARE AND SOFTWARE

- SDC has one data center in Torrance, CA. The company maintains a nationwide communications network to service its clients throughout the U.S. Its equipment consists of:

 . 4 Honeywell level 66s operating under CP/6.
 . 1 IBM 370/165 operating under VSAM and CICS.
 . 1 IBM 4300 operating under VSAM and CICS.

©1981 by INPUT. Reproduction Prohibited.

SCIENCE MANAGEMENT CORPORATION
SMC Systems and Technology Group
1011 Route 22, P.O. Box 6800
Bridgewater, NJ 08807
(201) 685-9000

James A. Skidmore, Jr.
Chairman and President
Public Corporation, AMEX
Total Employees: 830
Total Revenue, Fiscal Year End
12/31/80: $49,849,000
Computer Services Revenue:
$13,800,000

PRINCIPAL BUSINESS

- Science Management Corporation (SMC), founded in 1946, is a diversified professional services company with two principal business segments: Management Services and Engineering Services. Computer services activities are concentrated in SMC Systems and Technology, one of four groups within Science Management. Professional services, software products, and facilities management are offered through four of its six subsidiaries, as shown in the exhibit.

FINANCIALS

- Computer services revenue by subsidiary ($ thousands):

	1980	1979
SMC Federal Systems, Inc.	$ 8,000	$7,000
SMC Computer Services, Inc.	2,300	1,800
SMC Facilities Management, Inc.	2,000	-
SMC Proprietary Software, Inc.	1,500	1,000
	$13,800	$9,800

ACQUISITIONS

- Effective September 10, 1979, SMC acquired all of the outstanding capital stock of Data Technology Industries, Inc. (DTI), a company engaged in developing proprietary systems software and custom programming services. Purchase price was approximately $1,674,000 and included issuance of 423,475 shares of common stock. The company was renamed SMC Systems and Technology, Inc. and has since been expanded to offer a variety of products and services as SMC Systems and Technology Group.

©1981 by INPUT. Reproduction Prohibited.

EXHIBIT

ORGANIZATION CHART

October 1981
©1981 by INPUT. Reproduction Prohibited.

EMPLOYEES

- Of SMC's 830 employees, 415 are involved with computer services. They are divided by subsidiary as follows:

SMC Federal Systems, Inc.	250
SMC Computer Services, Inc.	50
SMC Facilities Management, Inc.	90
SMC Proprietary Systems, Inc.	25
	415

SOURCES OF REVENUE

75%	Professional services
14	Facilities management
11	Software products
100%	

PRODUCTS AND SERVICES

- Professional services are provided through the SMC Federal Systems and SMC Computer Services subsidiaries of SMC Systems and Technology Group.

 - SMC Federal Systems, Inc. provides systems design, programming, and consulting to federal agencies in the greater Washington DC area.

 . Contracts generally support development of systems for large mainframes such as IBM, Univac, and Honeywell.

 . Services provided include: analysis and design of an automated reporting system for the Securities and Exchange Commission to monitor inside trading; programming support to the U.S. Geological Survey's space satellite data collection on water resources; development of an automated system for the U.S. Postal Service to track mail fraud and illegal mailings; conversion of Department of Interior's payroll and personnel accounting system for use by the U.S. Department of Education; a $1 million contract to develop and maintain payroll, personnel, and accounting systems for the Department of Housing and Urban Development.

 - SMC Computer Services, Inc. provides consulting, contract programming, and system analysis services to clients in the non-Federal marketplace.

 . Experience with the public utility industry includes the design, development, testing, and implementation of various application systems including customer accounting and billing; construction accounting; project accounting and reporting; on-line customer

©1981 by INPUT. Reproduction Prohibited.

information; property records, material management, and employee information. Clients include: Baltimore Gas & Electric, Washington Gas Light Co., and Florida Power & Light.

- SMC Computer Services develops, implements, and converts a variety of information specific systems for state and local governments including: human resource/personnel information; business tax; interagency law enforcement; student school scheduling; Medicaid; and health information screening.

- SMC Computer Services has developed and implemented financial applications for Virginia National Bank and United Virginia Bank.

- Professional services have been provided in a wide range of areas (construction, engineering, health care, transportation) to Fortune 1000 firms including AMTRAK, Westinghouse, Air Products & Chemicals, Boeing Computer Services, McCormick Space Company, Chrysler Motors, Bethlehem Steel, Litton Industries, and The Washington Post.

- Systems Integration, a group within this division formed this year, will provide hardware/software consulting to develop custom turnkey systems using products marketed by SMC Proprietary Software in the wholesale distribution, inventory control, and insurance industry areas.

- Facilities management services were first offered by SMC in July 1980 through a newly formed subsidiary, SMC Facilities Management, Inc.

 - These services are targeted to federal and state governments and focus on information processing for large quantities of data.

 - The division's first client, the Selective Service System, awarded SMC a $2 million one-year contract to perform processing services for the renewed draft registration program.

 - In early 1981 a contract was obtained from the Middle East Division of the U.S. Army Corps of Engineers to supply staff to maintain its large computer system.

 - A contract was recently awarded by the State of Maryland for SMC to provide welfare voucher processing.

- Proprietary software products for minicomputers are developed by SMC-Proprietary Software Inc. Currently, three products are available.

 - IDOL , a data base management system runs on Basic Four, IBM Series 1, Rexon, Pertec, Texas Instruments, Onyx, Zilog System 8000, Plexus, Micro V and Mercator computers.

©1981 by INPUT. Reproduction Prohibited.

 - . There are over 3,000 IDOL systems installed.
 - . Prices range from $1,000 to $2,500.

- BAS (Business Applications Software) is an accounting system for general ledger, accounts payable and receivable, order processing, fixed assets, payroll, purchase orders, and job costs.
 - . BAS is designed for general applications as well as for specific use by wholesalers, distributors, insurance agencies, and small to medium construction companies.
- Business BASIC Interpreter offers automatic input editing of data and string and arithmetic functions with debugging done in the interactive mode.
 - . Compatible with Basic Four Corporation's business basic language, SMC's Business BASIC Interpreter is available for IBM Series 1, Onyx, Zilog System 8000, Plexus and other Zilog 8000-based microprocessor computers.
 - . There are currently 500 systems installed.
 - . Prices range from $150 to $500.
- SMC has plans to install IDOL, BAS, and Business BASIC Interpreter on other 16 bit based computer systems, including the Motorola M68000 and Intel 8086/8088, by the end of this year.
- SMC's software products are distributed by over 200 licensed vendors in the U.S., Canada, and Europe.

INDUSTRY MARKETS

Government (federal)	50%
Government (state and local)	10
Other	40
	100%

GEOGRAPHIC MARKETS

U.S.	90%
International (Canada, Europe, Australia)	10%

- SMC Systems and Technology maintains offices in Arlington (VA), Bridgewater (NJ), Houston (TX), Landover (MD), Richmond (VA), and Washington, DC.

©1981 by INPUT. Reproduction Prohibited.

COMPUTER HARDWARE

- SMC Proprietary Software maintains a research center with a variety of small and desktop computer systems including IBM Series 1, and Basic Four and most 16-bit microprocessor based microcomputers on which it develops operating systems software, language processor software, data base management system software, and application systems software. These microcomputers include:

 - Rexon.
 - Mercator.
 - Onyx.
 - Zilog System 8000.
 - Plexus.
 - Texas Instrument.
 - Pertec.
 - Micro V.
 - IBM Personal Computer.
 - Fortune Systems.
 - Seiko.
 - Commodore.

- A variety of computer systems are used in other SMC Systems and Technology subsidiaries including Basic Four, Data General, Rexon, Mercator, IBM Series/1, and Commodore.

©1981 by INPUT. Reproduction Prohibited.

SCIENTIFIC COMPUTERS, INC.
10101 Bren Road East
Minnetonka, MN 55343
(612) 933-4200

Richard A. Walter, Chairman and CEO
Public Corporation, OTC
Total Employees: 250
Total Revenue, Fiscal Year End
6/30/85: $14,442,961

SCIENTIFIC COMPUTERS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM / FISCAL YEAR	6/85	6/84	6/83	6/82	6/81
Revenue	$ 14,443	$ 14,891	$ 13,261	$ 12,934	$ 10,853
. Percent increase (decrease) from previous year	(3%)	12%	3%	19%	1%
Income from continuing operations before taxes	$ 1,027	$ 2,369	$ 2,642	$ 3,136	$ 2,860
. Percent increase (decrease) from previous year	(57%)	(10%)	(16%)	10%	2%
Income from continuing operations after taxes	$ 567	$ 1,229	$ 1,387	$ 1,627	$ 1,487
. Percent increase (decrease) from previous year	(54%)	(11%)	(15%)	9%	2%
Income (loss) from discontinued operation (a)	-	-	-	$ (86)	$ 0.9
Loss on disposition (a)	-	-	$ (50)	$ (120)	-
Net income	$ 567	$ 1,229	$ 1,337	$ 1,421	$ 1,488
. Percent increase (decrease) from previous year	(54%)	(8%)	(6%)	(5%)	4%

©1985 by INPUT. Reproduction Prohibited.

Earnings per share from continuing operations	$ 0.48	$ 0.82	$ 0.92	$ 1.10	$ 1.01
. Percent increase (decrease) from previous year	(41%)	(11%)	(16%)	9%	2%
Net earnings per share	$ 0.48	$ 0.82	$ 0.89	$ 0.96	$ 1.01
. Percent increase (decrease) from previous year	(41%)	(8%)	(7%)	(5%)	4%

(a) In June 1982 SCI closed its TransArt division. The above financials have been reclassified to segregate the results of the discontinued segment and the estimated loss on any future disposition of this division. Revenue figures represent continuing operations only.

- SCI management attributes the decrease in fiscal 1985 revenue to the decrease in processing services provided to customers in agriculture-related businesses due to the depressed market of that industry segment. The decrease in revenue from this segment was partially offset by increases in services to direct mail customers.

 - Lower income and earnings were attributed to higher costs associated with increased direct mail marketing services that are more labor-intensive than other processing services.

 - Expenses in fiscal 1985 also include direct expenses of approximately $488,000 of costs incurred in opposing an unsolicited tender offer that was concluded in October 1984.

- Revenue for the first quarter of fiscal 1986 ending September 30, 1985 was $3 million, down 10% from $3.4 million for the first quarter of fiscal 1985. Net income was $740 compared to $181,051 for the same quarter the previous year.

SOURCE OF REVENUE

- Approximately 99% of SCI's fiscal 1985 revenue was derived from processing services and related printing and automated control systems for direct mail marketing. The remaining 1% was derived from interest income.

 - SCI's target markets are manufacturers, direct mail marketers, data base publishers, wholesale and retail distributors, and insurance companies.

 - In August 1985 SCI acquired St. John's Data Systems, Inc., a development stage company providing software systems for capturing and maintaining work flow information in a production environment. The system is currently installed principally in the printing industry, but

©1985 by INPUT. Reproduction Prohibited.

SCI plans to adapt the system for use by discrete manufacturers and other businesses as well as offering the system on SCI's network services. Terms of the acquisition were not disclosed.

©1985 by INPUT. Reproduction Prohibited.

SCIENTIFIC COMPUTERS, INC.
10101 Bren Road East
Minnetonka, MN 55343
(612) 933-4200

Richard A. Walter, President, Chairman, and CEO
Public Corporation, OTC
Total Employees: 200 (full-time)
Total Revenue, Fiscal Year End 6/30/83: $13,260,877
Computer Services Revenue: $12.4 million

SCIENTIFIC COMPUTERS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	6/83	6/82	6/81	6/80	6/79
Revenue	$13,261	$12,934	$10,853	$10,728	$9,109
. Percent increase from previous year	3%	19%	1%	18%	17%
Income from continuing operations before taxes	$ 2,642	$ 3,136	$ 2,860	$ 2,800	$2,230
. Percent increase (decrease) from previous year	(16%)	10%	2%	26%	63%
Income from continuing operations after taxes	$ 1,387	$ 1,627	$ 1,487	$ 1,463	$1,119
. Percent increase (decrease) from previous year	(15%)	9%	2%	31%	60%
Income (loss) from discontinued operation	-	$ (86)	$ 0.9	$ (27)	$ (112)
Loss on disposition	$ (50)	$ (120)	-	-	-
Net income	$ 1,337	$ 1,421	$ 1,488	$ 1,437	$1,007
. Percent increase (decrease) from previous year	(6%)	(5%)	4%	43%	37%

© 1984 by INPUT. Reproduction Prohibited.

Earnings per share from continuing operations	$ 0.92	$ 1.10	$ 1.01	$ 0.99	$ 0.76
. Percent increase (decrease) from previous year	(16%)	9%	2%	30%	58%
Net earnings per share	$ 0.89	$ 0.96	$ 1.01	$ 0.97	$ 0.68
. Percent increase (decrease) from previous year	(7%)	(5%)	4%	43%	33%

- In June 1982 SCI closed its TransArt division. The above financials have been reclassified to segregate the results of the discontinued segment and the estimated loss on any future disposition of this division. Revenue figures represent continuing operations only.

SOURCE OF REVENUE

- Approximately 93% of SCI's total fiscal 1983 revenue was derived from computer services. The following is an estimated breakdown of revenue sources:

	Revenue ($ millions)	Percent of Total
Computer services		
- Remote computing	$ 7.6	57%
- Data conversion	1.1	8
- Computerized printing/ graphic arts/direct mail	3.7	28
Subtotal	$ 12.4	93%
Noncomputer services		
- Printing services	$ 0.5	4%
- Interest and other	0.4	3
Subtotal	$ 0.9	7%
Total	$13.3	100%

© 1984 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SCIENTIFIC COMPUTERS, INC.
10101 Bren Road East
Minnetonka, MN 55343
(612) 933-4200

Richard A. Walter, President,
Chairman, and CEO
Public Corporation, OTC
Total Employees: 215
Total Revenue, Fiscal Year End
6/30/82: $12,934,382
Computer Services Revenue:
$12,400,000

THE COMPANY

- Scientific Computers, Inc. (SCI), founded in 1959, provides on-line processing services primarily to customers in the distribution, manufacturing, direct mail, and insurance industries. The company also provides data conversion and various graphic arts services.

- Revenue from continuing operations in fiscal 1982 reached $12.9 million, a 19% increase over 1981 revenue of $10.9 million. Income from continuing operations after taxes increased 9% from $1.5 million in 1981 to $1.6 million in 1982. A five-year financial summary follows:

©1983 by INPUT. Reproduction Prohibited.

SCIENTIFIC COMPUTERS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	6/82	6/81	6/80	6/79	6/78
Revenue	$12,934	$10,853	$10,728	$9,109	$7,794
. Percent increase from previous year	19%	1%	18%	17%	11%
Income from continuing operations before taxes	$ 3,136	$ 2,860	$ 2,800	$2,230	$1,368
. Percent increase from previous year	10%	2%	26%	63%	68%
Income from continuing operations after taxes	$ 1,627	$ 1,487	$ 1,463	$1,119	$ 700
. Percent increase from previous year	9%	2%	31%	60%	54%
Income (loss) from discontinued operation	($ 86)	$ 0.9	($ 27)	($ 112)	($ 37)
Loss on disposition	($ 120)	-	-	-	-
Net income	$ 1,421	$ 1,488	$ 1,437	$1,007	$ 737
. Percent increase (decrease) from previous year	(5%)	4%	43%	37%	68%
Earnings per share from continuing operations	$ 1.10	$ 1.01	$ 0.99	$ 0.76	$ 0.48
. Percent increase from previous year	9%	2%	30%	58%	60%
Net earnings per share	$ 0.96	$ 1.01	$ 0.97	$ 0.68	$ 0.51
. Percent increase from previous year	(5%)	4%	43%	33%	70%

- In June 1982 SCI closed its TransArt division. The above financials have been reclassified to segregate the results of the discontinued segment and estimated loss on any future disposition of this division. Revenue figures represent continuing operations only.

 - The TransArt division imprinted various transfers on garments and had revenue of $1.7 million, $2.6 million, and $2.4 million in fiscal 1982, 1981, and 1980, respectively.

©1983 by INPUT. Reproduction Prohibited.

- The division had pretax losses of approximately $160,000 in fiscal 1982.

- Approximately 80%, or $1.5 million, of the increase in 1982 revenue was due to increased sales in the company's computerized direct mail marketing services, while the balance was the result of the addition of new processing services customers.

- Major SCI clients in fiscal 1982 included:

 - The Minnesota Mutual Life Insurance Company of St. Paul, which accounted for 14% of fiscal 1982 revenue for the provision of computerized direct mail marketing services.

 - Pickwick International, which accounted for 12%, 16%, and 18% of revenue from continuing operations in fiscal 1982, 1981, and 1980, respectively.

 . SCI is providing interim processing services to Pickwick while the customer develops and implements his own in-house system. Processing services provided to Pickwick, a company in the distribution industry, are expected to terminate by June 30, 1983.

- Revenue for the six months ending December 31, 1982 was $6.8 million, a 10% increase over revenue of $6.2 million for the same period in 1981. Net income was $809,411, declining slightly from $814,237 in 1981.

- SCI is structured as follows:

 - SCI's headquarters location in Minnetonka provides remote computing services.

 - Ketabular Processing Company, a division in Phoenix, provides data conversion services.

 - Workman Service, Inc., a wholly owned subsidiary, provides computerized direct mail marketing and graphic arts services.

- As of June 30, 1982, SCI had 215 employees. As of March 1983 the number of employees remains at approximately 215, segmented as follows:

Marketing/sales	8
Software services/customer support	42
Computer operations	33
Direct mail/graphic services	119
General and administrative	13
	215

©1983 by INPUT. Reproduction Prohibited.

KEY PRODUCTS AND SERVICES

- Approximately 96% of SCI's total fiscal 1982 revenue was derived from computer services. An estimated breakdown of source of revenue follows:

	Revenue ($ millions)	Percent of Revenue
Computer Services		
- Remote computing	$ 8.7	67%
- Data conversion	0.6	5
- Computerized printing/ graphic arts/direct mail	3.1	24
Subtotal	$ 12.4	96%
Noncomputer services		
- Printing services	$ 0.2	2%
- Interest and other	0.3	2
Subtotal	$ 0.5	4%
TOTAL	$ 12.9	100%

- All of SCI's remote computing services are interactive. Processing services provide industry specific applications for the manufacturing, distribution, direct mail, and insurance sectors.
 - SCI has approximately 75 clients accessing its network from over 450 terminal locations across the U.S.
 - Primary applications offered on SCI's network include:
 - A distribution system, offered since 1970, which provides order entry, invoicing, inventory control, sales analysis, accounts payable, accounts receivable, general ledger, payroll, and direct mail applications.
 - A manufacturing system, introduced in 1972, which includes bill of materials, material requirements planning, shop control, inventory control, capacity planning, labor reporting, and master scheduling applications.
 - Premium and membership accounting systems for the insurance industry.
 - A cross-industry fixed asset system.
- Batch data conversion work provided by SCI includes name and address file conversions, inventories, contract work for commercial tax return preparers, and the conversion of documents to be used in large-scale litigation.

©1983 by INPUT. Reproduction Prohibited.

- Through its Workman Service subsidiary SCI provides computerized direct mail marketing and printing services.
 - Services are provided in three major categories:
 - Materials associated with computerized direct mail marketing services.
 - Computerized Price Book Publication Services consisting of the preparation and distribution of price books, catalogs, and supplements used by SCI customers in their marketing and customer service activities.
 - Preparation and distribution of technical and other manuals.
 - Printing/graphic arts services include offset printing, data base typesetting, personalized direct mail systems, automated price book systems, electronic laser printing, and automated mailing services.
 - SCI currently provides these services to over 150 clients.

INDUSTRY MARKETS

- SCI derives its revenue from the wholesale and retail distribution, insurance, discrete manufacturing, and direct mail services industry sectors.

GEOGRAPHIC MARKETS

- One hundred percent of SCI's revenue is derived from the U.S.

COMPUTER HARDWARE AND SOFTWARE

- SCI has the following systems installed at its headquarters in Minnetonka.
 - 2 NAS AS/5-3s, VSE.
 - 1 IBM 4341, VSE.
- Clients access SCI's network via leased lines or dial-up.

©1983 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SCIENTIFIC COMPUTERS, INC.
10101 Bren Road East
Minnetonka, MN 55343
(612) 933-4200

Richard A. Walter, President
Public Corporation OTC
Total Employees: 250
Total Revenues, Fiscal Year End 6/30/80: $13,090,000
Total Computer Services Revenues: $9,032,000

THE COMPANY

- Scientific Computers, Inc., (SCI) was founded in 1959 as a batch service bureau providing custom services. SCI has since shifted its focus to remote computing services, provided primarily to the manufacturing, distribution and insurance sectors.

- SCI's revenues have grown at a compounded growth rate of 21% for the past five years. FY 1980 revenues increased to $13,090,000, a gain of 19% over 1979's $10,959,000. Net income for the same period increased 43% from $1,007,000. A five-year financial summary follows:

SCIENTIFIC COMPUTERS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ Thousands, Except Per Share Data, FYE 6/30)

FISCAL YEAR / ITEM	1980	1979	1978	1977	1976
Revenues	$13,090	$10,959	$9,443	$ 7,721	$ 5,632
. Percent increase from previous year	19%	16%	22%	37%	13%
Income before taxes and extraordinary items	$ 2,749	$ 2,007	$1,441	$ 800	$ 283
. Percent increase from previous year	37%	39%	80%	183%	21%
Net income	$ 1,437	$ 1,007	$ 737	$ 440	$ 174
. Percent increase from previous year	43%	37%	68%	153%	40%
Earnings per share	$ 1.95	$ 1.37	$1.01	$ 0.63	$ 0.24
. Percent increase from previous year	42%	36%	60%	163%	41%

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Approximately 69% of SCI's revenues in FY 1980 was derived from data processing services. The remaining 31% was generated from fabric transfer (18%) and graphic arts services (13%). A five-year summary of SCI's computer services revenues follows:

SCIENTIFIC COMPUTERS, INC.
FIVE-YEAR FINANCIAL SUMMARY
DATA PROCESSING SERVICES REVENUES
($ Thousands, FYE 6/30)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Computer Services Revenues	$ 9,032	$ 7,687	$6,669	$ 5,636	$ 4,224
. Percent increase from previous year	17%	15%	18%	33%	16%
. Percent of total revenue	69%	70%	71%	73%	75%

- Major organizational changes occurred during the past year. SCI closed its subsidiary, Scientific Computers, Inc. of Illinois, in Waukegan (IL), which provided remote computing services, and moved its operations to Minnetonka (MN). SCI is now organized as follows:

 - On-Line Data Services Division in Minnetonka provides remote computing services to the manufacturing and distribution sectors.

 - Keytabular Processing Company, a division in Phoenix (AZ), provides data entry services.

 - Workman Service, Inc. (WSI), a wholly owned subsidiary, provides graphic arts services. It has recently integrated its printing, photocomposition and mailing business with SCI's remote computing services.

 . TransArt, a division of WSI, is active in the fabric transfer business.

- SCI employs 250 people, segmented as follows:

Sales/marketing	6
Software/customer support	40
Computer operations	179
General and administrative	25
Total	250

- SCI believes its major source of competition comes from computer manufacturers.

- SCI's strengths lie in its successful track record as well as its managerial ability to cut operational costs when necessary. Pre-tax profit margins for the

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

last five years have been steadily increasing: 5% in 1976, 10% in 1977, 15% in 1978, 18% in 1979, and 21% in 1980.

KEY PRODUCTS AND SERVICES

- Approximately 89% ($8 million) of SCI's data processing service revenues is derived from remote computing services, with the remainder from data entry services (batch services). Remote computing services are offered in an interactive mode only. All processing services are industry specialty services for the manufacturing, distribution and insurance sectors.

- Major software applications offered to approximately 250 clients on SCI's network include:

 - A distribution system, offered since 1970, which provides order entry, invoicing, inventory control, sales analysis, accounts payable, accounts receivable, general ledger, payroll and direct mail applications.

 - A manufacturing system, introduced in 1972, which includes bill of materials, material requirements planning, shop control, inventory control, capacity planning, labor reporting and master scheduling applications.

 - Other applications, including a premium accounting system for the insurance sector, an electronic mail system that can be used by any industry sector, and photocomposition for graphic arts.

- Types of data entry work include name and address file conversions, inventories, contract work for commercial tax return preparers and the conversion of documents to be used in large-scale litigation.

INDUSTRY MARKETS

- SCI received approximately 80% of its computer services revenues in FY 1980 from manufacturers and distributors. Revenues were derived from the following industry sectors:

Discrete manufacturing	40%
Insurance	15
Retail distribution	10
Wholesale distribution	30
Other (cross-section)	5
	100%

GEOGRAPHIC MARKETS

- Approximately 87% of SCI's computer services revenues are derived from the Northwest Central region, as follows:

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

Northwest Central	87%
South Atlantic	4
Southwest Central	3
Mountain	3
Pacific	3
	100%

COMPUTER HARDWARE

- SCI uses a National Advanced Systems AS/5 and an AS/3 and one IBM 370/145, both operating under DOS. SCI uses its own teleprocessing software for its network services.

- SCI's data center is located in Minnetonka, Minnesota. Remote computing services are provided via leased lines serving 30 cities in fifteen states.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

COMPANY HIGHLIGHT

SCIENTIFIC COMPUTERS, INC.
10101 Bren Road, East
Minnetonta, MN 55343
(612) 933-4200

Richard A. Walter, President & Chief Executive Officer
Public corporation
Total employees: 175
Total revenues, fiscal year end 6/30/77: $7,700,000*
Computer services revenues, fiscal end 6/30/77: $5,390,000*

THE COMPANY

- Scientific Computers, Inc. (SCI) was incorporated in Minnesota in 1959 as a batch service bureau providing custom services. Now the company primarily offers remote computing services with packaged applications for manufacturers and distributors.

- Revenues increased approximately 38% from $5.6 million in fiscal 1976 to $7.7 million in fiscal 1977. The increase in computer services revenues during the same period was 29%, from approximately $4.2 million to $5.4 million. Net after tax earnings rose 153% from $173,831, to $439,805.

 - Since 1975, total revenues have had an average annual growth rate of 24%, from $5 million in FY 1975 to $7.7 million in FY 1977. Computer services revenues have increased an average 25% per year from $3.7 million in FY 1975 to $5.8 million in FY 1977.

 - For the nine months ending March 31, 1978, SCI revenues were $7.0 million.

- In FY 1974, SCI acquired Ketabular Processing Company (Phoenix, Arizona), a service bureau providing data entry services to companies in Phoenix. Ketabular provided only 5% of SCI computer services revenues in FY 1977.

- Other revenues are generated by a subsidiary, Workman Service, Inc., which provides graphic arts and temporary office services in Minneapolis.

KEY PRODUCTS AND SERVICES

- One hundred percent of the company's revenues are generated by processing services.

* Estimate

May 1978

© 1978 by INPUT, Menlo Park, CA 94025. Reproduction Prohibited.

- Since its founding as a batch service bureau in 1959, SCI has continuously moved away from batch and toward remote computing services. In FY 1975, remote computing services generated less than 50% of computer services revenues. In FY 1977, they contributed 80% of computer services revenues and are expected to produce approximately 85% of services revenues in FY 1978.
- Approximately 90% are specialty services to the manufacturing, distribution, and insurance industries. Of these specialty services, 89% approximately are offered in interactive remote computing mode and 11% in batch mode. Batch revenues often derive from the remote computing business.
- The other 10% are from data entry services offered to a variety of industries.

- Introduced in 1970, SCI's distribution system now has 35 users and produces 50% of computer services revenues. It includes order entry, invoicing, inventory control, sales analysis, accounts payable, accounts receivable, general ledger, and payroll.

- The manufacturing System, introduced in 1972, currently has 11 users and produces 35% of computer services revenues. It includes bill of materials, materials requirements planning, shop control, and inventory control.

- Insurance includes premium accounting and mail services.

APPLICATIONS AND INDUSTRY MARKETS

- Ninety percent of SCI revenues derive from specialty processing services for the discrete manufacturing and wholesale distribution industries. Of this 90%, the distribution industry provides approximately 50%, manufacturing 35%, and insurance 15%. (The distribution clients are frequently wholesalers with retail outlets.)

- Ten percent of revenues are from utility services to the banking, distribution, education, state and local government, insurance, manufacturing, and services industries.

GEOGRAPHIC MARKETS

- In FY 1977, approximately 87% of computer services revenues were derived from the West North Central U.S., 9% from the North Central states, 2% from the Mountain states, and 2% from the Southeastern states.

- Sales offices are located in Minneapolis, Phoenix, and Waukegan (IL).

© 1978 by INPUT, Menlo Park, CA 94025. Reproduction Prohibited.

COMPANY HIGHLIGHT/SCIENTIFIC COMPUTERS, INC.

COMPUTER HARDWARE AND SOFTWARE

- SCI utilizes two ITEL AS/4 mainframes running under DOS to provide its remote computing services. The AS/4s replaced IBM 370/145s.
- Approximately 170 IBM 3767 and four Data 100/70 intelligent terminals are installed at client locations and the SCI computer center.
- The network is composed of dial-up lines.

© 1978 by INPUT, Menlo Park, CA 94025. Reproduction Prohibited.

COMPANY HIGHLIGHT

SCIENTIFIC COMPUTERS, INC.
10101 Bren Road East
Minnetonka, Minnesota 55343
(612) 933-4200

Richard A. Walter, President
Public corporation
Total company sales as of FY ending 1975: $4,998,748
Computer services sales as of 6/75: $3,650,000

NUMBER OF EMPLOYEES engaged in computer services: 150

KEY PRODUCTS/SERVICES: SCI markets mostly remote computing and batch services, which combined represent 65% annual computer services sales. The balance is comprised of software services and data entry services. Products are tailored to the manufacturing and distribution industries. Examples include:

- Standard Distribution System:
 - Provides order processing, accounts payable, accounts receivable.
- PFIRM II:
 - Performs inventory control, material requirements, planning, bill of material.

APPLICATIONS: SCI offers general business-oriented applications particularly suited to manufacturing and distribution firms, for example:

- Order processing
- Costing
- Working
- Bill of material
- Inventory control
- Material requirements planning
- Sales analysis

INDUSTRY MARKETS: Retail and wholesale distribution firms represent 76% of SCI business, and manufacturing the remaining 24%.

GEOGRAPHIC MARKETS: Most users are concentrated in the Midwest area, with the balance in the North Central and Western regions. Besides Minneapolis, Minnesota, sales offices are located in Phoenix, Arizona and Waukegan, Illinois.

COMPUTER HARDWARE AND SOFTWARE:

1 IBM 370/145, DOS, Minneapolis

OVERALL ASSESSMENTS AND TRENDS:

President Richard Walter, and Vice Presidents Kirk A. MacKenzie, Edward L. Vick and other top managers are capable and well-informed regarding the overall outlook for the computer services industry. They are seeking opportunities for expansion but are being selective. To expand markets

COMPANY HIGHLIGHT/SCIENTIFIC COMPUTERS, INC.

SCI has acquired Ketabular Processing Inc. (Phoenix, Arizona) and Workman Service Inc. which provides graphic arts and temporary services. Workman Service represents diversification from being strictly a computer service company. Management has set a realistic sales objective of $9 million for 1980. SCI is profitable ($112,975 or 2.3% for 1974) but needs to devise opportunities for expansion of both sales and profits.

COMPANY BRIEF

Primary Industry-Specific Market: Manufacturing

Scientific Systems Services, Inc. (SSS)
2000 Commerce Drive
P.O. Box 610
Melbourne, FL 32901
(305) 725-1300

CEO: Vincent S. Lamb, Jr., Chairman & President
Public Company (NASDAQ)
Employees: 300 (7/86)

Revenue (FYE 12/31/85): $22.5 million

The Company: SSS develops and sells software intensive computer systems in manufacturing automation, industrial process control, and power generation monitoring

Sources of Revenue:
- Turnkey Systems (40%)
- Application Software (40%)
- Consulting/System Integration (20%)

Key Products and Services:
- Turnkey Systems (Utilizes Gould, Modcomp, HP, DEC MicroVAX)
 - Process Control Systems
 - Product Tracking Systems
- Application Software (Utilizes DEC MicroVAX)
 - Distributed Data Acquisition (SPIROS)
- Consulting/System Integration
 - Integrated Decision Support Systems

Target Applications:
- Shop floor coordination and supervision
- Software-based information systems

Target Industries:
- Manufacturing (46% of FY 1985 revenues)
- Primary Metals (14% of FY 1985 revenues)
- Utilities (Less than 10% of FY 1985 revenues)

©1986 by INPUT. Reproduction Prohibited.

Geographic Markets:
- U.S. (100%)
- Sales Offices: Melbourne (FL), Pittsburgh, Detroit, Thousand Oaks (CA)

Significant Events:
- Acquired Profimatics, Inc. (California) on July 14, 1983
- Joint product development project with Inland Steel Co.

October 1986

©1986 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SCIENTIFIC TIME SHARING CORP.
7316 Wisconsin Avenue
Bethesda, MD 20014
(301) 657-8220

Daniel Dyer, President
Private Corporation
(Closely held)

Total Company and Computer Services
Sales as of FY ending 5/76: $7,000,000

NUMBER OF EMPLOYEES engaged in computer services: 111

KEY PRODUCTS/SERVICES: STSC offers the APL language on a remote computing basis. The trade name is APL PLUS service. The firm also provides occasional contract programming and educational services pertaining to APL.

APPLICATIONS: Applications marketed are primarily general business and data base oriented, such as financial planning, materials management, data base management, marketing and research. Proprietary applications packages available through the network include:

- FINACEPAK: financial functions library
- FPS, Financial Planning System
- SIMS, Shared Information Management System
- 707: for materials management simulation
- 747: for forecasting and inventory management
- PERT*PLUS: a project control system
- CUPAK: for general ledger accrual accounting
- ACT*PLUS: an acturial language
- ADDRESS: for address list management
- MAILBOX: for electronic communications
- MARTHA: for electrical circuit analysis (developed by MIT)
- STATPAK: for mathematical solutions
- REMOTE MPSX: for linear programming
- PLOT: for graphic display

Financially oriented applications are used specifically for order entry, shipping, billing, collections, modeling profit forecasting, foreign currency, exposure analysis, capital investment analysis, and Monte Carlo risk analysis. Access to the National Bureau of Economic Research data base of over 3000 economic time series has facilitated several of these applications.

INDUSTRY MARKETS: The majority of STSC revenues are derived from the manufacturing, banking and insurance industries.

COMPANY HIGHLIGHT/SCIENTIFIC TIME SHARING CORP.

GEOGRAPHIC MARKETS: Customers are distributed throughout the U.S.; a few are located in Europe and Canada. The network can be accessed by a local telephone call in over 100 U.S. cities, and it is linked to Europe through Tymshare Corporation's TYMNET.

Branch and sales offices are located in the following cities:

Atlanta, GA	Menlo Park, CA
Bethesda, MD	New York, NY
Boston, MA	Philadelphia, PA
Chicago, IL	Pittsburgh, PA
Dallas, TX	Rochester, NY
Ft. Lauderdale, FL	Salt Lake City, UT
Hartford, CT	San Francisco, CA
Houston, TX	Washington, D.C.
Los Angeles, CA	White Plains, NY

COMPUTER HARDWARE AND SOFTWARE: The following computers are located in Bethesda:

2	IBM	370/155

OVERALL ASSESSMENT AND TRENDS: STSC initially began offering APL services in 1969. Management is clearly committed to the APL language and its potential to render obsolete FORTRAN, COBOL, BASIC and PL1. Top management, in addition to Daniel Dyer, includes:

- P.P. Gehl, Vice President of Marketing
- G.L. Archer, Secretary
- R.C. Fick, Treasurer and Controller

Over 80% of the staff are professionals, many with advanced degrees. One of the unique aspects of STSC is that APL is promoted and used for business applications rather than for scientific computations.

In addition, the company is comtemplating replacing its two IBM 370/155s with an Amdahl 470. Customers have been notified that the Amdahl system is currently undergoing tests.

The firm has approached its initial capitalization conservatively and reports 10% net earnings for 1974. What profits there have been have been reinvested for growth.

The future of Scientific Time Sharing is highly dependent upon the APL language. The APL language was originally limited in working with files, however, IBM has now developed file structures and introduced the 5100 system. These factors have helped to reduce APL limitations. In addition, its existing base of APL customers are extremely loyal.

SCS/COMPUTE, INC.
1714 Deer Tracks Trail
St. Louis, MO 63131
(314) 966-1040

Robert W. Nolan, President
Public Corporation, OTC
Total Employees: 1,041
Total Revenue, Fiscal Year End
4/30/89: $31,537,000

The Company

SCS/Compute, Inc. provides individual and business income tax return processing services and microcomputer-based tax and accounting application software products to over 9,500 firms of certified public accountants and other tax professionals.

- SCS/Compute was incorporated in Missouri in 1981 to purchase certain assets of Comshare Tax Services, Inc., a Comshare subsidiary. The predecessor of Comshare Tax Services was Systematic Computer Systems, Inc., a corporation formed in 1972 by Robert W. Nolan and James W. Andrews.

- SCS/Compute was reincorporated in Delaware during 1986. In September 1986, SCS/Compute sold 700,000 shares of common stock in an initial public offering. Net proceeds of approximately $5.5 million were used to reduce various loans, for acquisition purposes, temporarily invested, or added to working capital.

SCS/Compute's long-term strategy is to respond to the changing computerized tax calculation industry. Increased interest in microcomputers for in-house control of the entire tax calculation process has driven the recent, rapid growth of in-house tax software. In response to this new interest, SCS/Compute marketed its first software package in 1985 and expanded its software offerings with the acquisition of Accountants Microsystems Incorporated (AMI) in 1988 and Quick Tax LTD in 1989.

SCS/Compute's fiscal 1989 revenue reached $31.5 million, a 29% increase over fiscal 1988 revenue of $24.5 million. Net income declined 60%, from $2.3 million in fiscal 1988 to $927,000 in fiscal 1989. A five-year financial summary follows:

Copyright 1989 by INPUT. Reproduction Prohibited.

SCS/COMPUTE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	4/89	4/88	4/87	4/86	4/85
Revenue	$31,537	$24,451	$18,018	$15,262	$13,261
• Percent increase from previous year	29%	36%	18%	15%	42%
Income before taxes	$803	$3,187	$3,059	$1,945	$1,203
• Percent increase (decrease) from previous year	(75%)	(4%)	57%	62%	(24%)
Net income	$927 (a)	$2,326	$1,655	$1,307	$730
• Percent increase (decrease) from previous year	(60%)	41%	27%	79%	(23%)
Earnings per share	$0.31 (a)	$0.77	$0.60	$0.58	$0.32
• Percent increase (decrease) from previous year	(60%)	28%	3%	81%	(32%)

(a) Includes additional income of $497,000 ($0.17 per share) from the cumulative effect of a change in the method of accounting for income taxes (Statement of Financial Accounting Standards No. 96).

SCS/Compute management attributes fiscal 1989 results to the following:

- Approximately 72% of the revenue increase was attributed to tax and accounting software revenue from AMI, which was acquired in January 1988. The balance of the increase resulted from improved sales of: individual and business return processing in the company's existing geographic markets; in-house processing services; and in-house software sales.
 - Although average revenue per tax return ($34) remained flat at 1988 levels, tax processing revenues rose 11% as total returns processed increased from 545,000 to 602,000.
 - Tax software sales reached $6.7 million, a 68% increase over $4 million for fiscal 1988.
- Lower profits were due primarily to expenses associated with the AMI acquisition. Due to permanent differences between

Copyright 1989 by INPUT. Reproduction Prohibited.

financial reporting and income tax reporting, primarily as a result of acquisition of AMI, the effective tax rate increased to 46% from 27% last year.

Revenue for the three months ending July 31, 1989 was $2.5 million, virtually unchanged from last year. Losses before the cumulative effect of a change in accounting were $2.4 million, compared to losses of $2.2 million for the same period a year ago. A 5% increase in expenses for the period resulted primarily from the hiring of personnel in two key areas.

Since its inception, SCS/Compute has acquired the following companies:

- In January 1988, SCS/Compute acquired Accountants Microsystems Incorporated (AMI) of Bellevue (WA) for approximately $9 million in cash and notes, plus a contingent payment of $904,579 based on the profitability of AMI for the twelve months ending April 30, 1988.
 - AMI, with revenue of nearly $8.9 million for the fiscal year ending April 30, 1988, provides microcomputer-based tax and accounting software products for accountants.
 - AMI now operates as a wholly owned subsidiary of SCS/Compute.
 - AMI contributed $5.5 million to SCS/Compute's fiscal 1988 revenue (from the date of acquisition) and over $10.6 million to fiscal 1989 revenue.
- In September 1989, SCS/Compute announced the acquisition of certain assets of Quick Tax LTD for approximately $1 million in cash, a portion of which will be based upon customer retention rates in the upcoming (1990) tax season.
 - Quick Tax provides tax software to approximately 400 customers located primarily in the New York area.
 - Quick Tax customers will be converted to SCS/Compute's AMI microcomputer software.
- Tax processing companies acquired by SCS/Compute include: Independent Tax Corporation of Los Angeles, in fiscal 1983; Infoservices, Inc. of Atlanta, in fiscal 1984; and A&H Income Tax Centers, Inc. of New York, in fiscal 1987. These operations have been merged into SCS/Compute.

Copyright 1989 by INPUT. Reproduction Prohibited.

Competitors include CCH Computax, Computer Language Research, as well as local and regional tax return processing firms.

Key Products and Services

Approximately 63% of SCS/Compute's fiscal 1989 revenue was derived from batch and on-line tax processing services and 32% from microcomputer-based tax and accounting software products. The remaining 5% of revenue was derived from other operating revenue.

In the three-year source of revenue summary that follows, fiscal 1988 results include the operations of AMI from the date of its acquisition in January 1988.

SCS/COMPUTE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	4/89		4/88		4/87	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Processing services						
Batch	$15.4	49%	$15.2	62%	$15.8	88%
On-line	4.0	13%	2.6	11%	1.5	8%
Other	0.9	3%	0.6	2%	0.3	2%
	$20.2	64%	$18.4	75%	$17.6	98%
Software products						
Tax software	$6.7	21%	$4.0	16%	$0.1	--
Accounting software	3.8	12%	1.6	7%	0.3	2%
	$10.5	33%	$5.6	23%	$0.4	2%
Other	$0.9	3%	$0.5	2%	--	--
TOTAL	**$31.5**	**100%**	**$24.5**	**100%**	**$18.0**	**100%**

Processing Services:

SCS/Compute provides individual (1040) and business (1065, 1120, and 1120S) income tax return processing services to firms of accountants and tax professionals.

- The company has typically experienced a high degree of repeat business. Customers who provided over 90% of

Copyright 1989 by INPUT. Reproduction Prohibited.

SCS/Compute's processing revenues in each of the last five years renewed their processing contracts for the next year.

- SCS/Compute processed approximately 602,000 returns during fiscal 1989, compared to 545,000 during fiscal 1988, and 527,000 during fiscal 1987.

- Revenue from individual return processing was approximately $18.1 million in fiscal 1989, $17.2 million in fiscal 1988, and $16.8 million in fiscal 1987.

- Revenue from business return processing was approximately $2.1 million in fiscal 1989, $1.2 million in fiscal 1988, and $771,000 in fiscal 1987.

SCS/Compute offers the following tax processing services for individual and business returns:

- Batch, or "Remote Processing Service", customers complete SCS/Compute-designed input forms with tax data, deliver them to operations centers where they are reviewed, entered into the computer, processed, and laser printed. Completed tax forms are then delivered to the accountant for filing with federal and state authorities. Normal turnaround time is 48 hours.

- The key/LASER Processing Service, introduced in 1984, is an on-line telecommunications service for customers who wish to use their microcomputers to access SCS/Compute's proprietary tax processing system. Customers enter tax data on their microcomputers, transmit the data to a SCS/Compute data center where the tax liability is calculated. Results are transmitted back to the customer for final approval. Returns can be printed on SCS/Compute's laser printers or in the customer's office using the key/LASER Printback option.

Microcomputer Software Products:

As a result of the acquisition of AMI in 1988, SCS/Compute now offers a series of tax and accounting software products for IBM and compatible microcomputers.

- Approximately 3,100 accounting firms used SCS/Compute tax return software during fiscal 1989, compared to 2,300 during fiscal 1988.

AMI contributed approximately $10.6 million to SCS/Compute's fiscal 1989 revenue. AMI software products are available for IBM

Copyright 1989 by INPUT. Reproduction Prohibited.

and compatible microcomputers operating under MS-DOS and multiuser systems operating under UNIX or XENIX.

- AMI's tax products include the TAX MACHINE[R], for 1040 tax return preparation, and the Corporate TAX MACHINE, for corporate (1120) tax return preparation.
 - TAX MACHINE software can operate as a separate system or can be integrated with AMI's line of accounting and business management products.
 - AMI tax products contributed $6.2 million to SCS/Compute's fiscal 1989 revenue.
- AMI accounting and practice management software for accountants contributed $3.6 million to SCS/Compute's fiscal 1989 revenue. There are currently over 4,000 installations of these products.
 - DATAWRITE[R] is a client accounting, general ledger, and financial statement preparation software product. The DATAWRITE product family includes add-on modules for payroll processing, business ratio analysis, remote data entry, and file importation and exportation to and from other AMI products, as well as spreadsheets and word processing programs.
 - Managing Partner is a professional time and billing product designed to control the internal record-keeping, billing, and collection needs of professional accountants and tax preparers.
- Business Partner, introduced in 1987, is a family of general accounting software products targeted to the small business clients of AMI's DATAWRITE users.
 - Business Partner modules are available for accounts receivable, accounts payable, payroll, general ledger, inventory control, sales order entry, purchase orders, information retrieval, business analysis, word processing, and interfacing to DATAWRITE.

LMS, introduced in 1985, is SCS/Compute's proprietary product for individual and business tax returns.

- Using LMS, the customer inputs tax return data into his microcomputer. After LMS calculates the tax, the customer may review the return and, when satisfied with the final result,

Copyright 1989 by INPUT. Reproduction Prohibited.

may print the tax return on a desktop laser printer in his own office or deliver his tax return diskette to SCS/Compute for final printing.

- LMS software sales contributed approximately $500,000 to fiscal 1989 revenue, compared to $259,000 in fiscal 1988, and $90,000 in fiscal 1987.

Industry Markets

One hundred percent of SCS/Computes' revenue is derived from accountants and other tax professionals.

SCS/Compute's processing services and LMS software product are marketed by the company's 33 direct sales representatives.

AMI software products are sold exclusively through a nationwide network of over 200 independent sales representatives, including accountants, hardware and software retailers, and computer consultants.

- These representatives work on a commission basis and generally also provide training and post-sales support.

Geographic Markets

One hundred percent of SCS/Compute's fiscal 1989 revenue was derived from the U.S.

Individual tax return software and services are currently available for use in 35 states.

Business tax return software and services are currently available in 14 states.

Operation Centers, which support SCS/Compute's processing services, are located in Atlanta, Los Angeles, New York, Phoenix, Portland, and St. Louis. Branch Operation Centers are located in Kansas City and San Francisco.

Sales offices are located in Atlanta, Charlotte, Chicago, Dallas, Denver, Detroit, Hot Springs, Kansas City, Los Angeles, New York, Orlando, Pasadena, Phoenix, Portland, St. Louis, San Francisco, Seattle, and Tallahassee.

Copyright 1989 by INPUT. Reproduction Prohibited.

Computer Hardware

SCS/Compute has data processing centers in Atlanta and Phoenix, with IBM and Prime computers installed.

Operation Centers, which interface with SCS/Compute's data centers for processing, have three or four high-speed laser printers installed in support of batch printing of tax returns.

Copyright 1989 by INPUT. Reproduction Prohibited.

COMPANY BRIEF

Cross Industry: Professional Services

SEI Information Technology
450 East Ohio Street
Chicago, IL 60611
(312) 440-8300

CEO: Fidelis Yumeh, President
Division of Shields Enterprizes
Founded: 1969

Employees: 110
Revenue (FYE 9/30/86): $7 million*

The Company: SEI Information Technology (SEI) provides computer-related professional services for Fortune 500 companies. The company specializes in development of manufacturing and financial software, and related services. Not affiliated with SEI Corporation of Wayne (PA).

Sources of Revenue:
- Professional Services (100%)

Key Services:
- Professional Services
 - Software development
 - Hardware recommendations
 - Implementation and follow-up
 - Systems design - SEI's services include all aspects of system design including analysis of old systems, new system recommendations, software development, installation and implementation, and software maintenance and enhancement

Target Industries:
- Cross industry - Fortune 500
- Manufacturers
- Financial institutions
- Government agencies

Geographic Markets:
- U.S. (100%)
- Sales Offices: Chicago, New York, Phoenix, Los Angeles, San Francisco

*INPUT estimate

©1986 by INPUT. Reproduction Prohibited.

Significant Events:

- Former president Russel Shields changed the ownership status of the company effective 10/1/86: SEI Information Technology changed from a private independent company to a subsidiary of Mr. Shields' new venture--Shields Enterprizes. Shields Enterprizes will be a holding company for small start-up ventures.

©1986 by INPUT. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

June 1998

Sema Group - Baan Services Providers

Jacques Roure
Corporate Business Development
E-mail: **jacques.roure@sema.fr**
Sema Group
16-18 rue Barbes
92120 Montrouge
France
Phone: **33 1 40 92 42 15**
Fax: **33 1 40 92 40 69**
Internet: **www.sema.com**

The following profile outlines the services and support offered by Sema Group for Baan Services Providers.

Company Background

Founded in 1958, Sema Group is one of the leading European information technology companies with activities world-wide. With some 16,300 employees across Europe, Asia and Americas, Sema manages and implements major information systems projects which are intrinsically linked to their client's strategic goals and long-term success. The group's main business activities are systems integration (including a significant element of consultancy), specialized software products, and outsourcing. They work across all key sectors of the economy, including telecommunications, industry, finance, energy, the public sector, retail and services.

Sema Group's strategy is based on the convergence of their activities - consulting, systems integration, products and outsourcing - into an integrated approach in order to provide their customers with global support throughout the life cycle of their business information systems. Sema's strategy also involves a sustained research and development effort, the driving force behind their systems integration and product business, to provide leading edge technologies and methodologies.

© 1998 by INPUT. Reproduction Prohibited

Sema Group has offices in Argentina, Belgium, Brazil, Canada, China, Columbia, Denmark, France, Germany, India, Italy, Malaysia, Netherlands, Norway, Portugal, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, United States, United Kingdom, and Venezuela.

Worldwide revenues totaled $1.4 billion in 1996, growing to more than $1.9 billion in 1997, of which $1.2 billion and $1.7 billion, respectively, came from European activities. Sema Group has 16,300 employees, of which 15,600 are located in Europe.

Sema Group is owned by France Telecom and Paribas and is a publicly held company listed on the London and Paris stock exchanges.

Baan Activities

Sema Group entered the European Baan services market in 1997.

Sema is developing Baan competence centers in the major European countries (France, Belgium, Germany, Italy, Netherlands, Spain, and the United Kingdom). Sema plans to have more than 100 Baan professional staff by the end of 1998, including all the resources necessary to support large Baan implementation projects.

Implementation Approaches

Sema Group is able to provide a full range of services throughout the life cycle of major Baan projects based on the following capabilities:

- Implementation of business process workflows with the ability to model not just a production plant's operations, but an entire supply chain, including suppliers, multiple production plants, complex distribution chains and customers
- Integration of advanced planning and scheduling (APS) engines for drastically improved on-time delivery rates, sharp reductions in inventory and work-in-process, and increases in numbers of satisfied customers
- Supporting Baan system implementation by the ability to: (1) identify existing bottlenecks; (2) re-engineer the corresponding business processes; and (3) provide extended change management capabilities.

Based on ITEOR, their object-oriented methodology framework, Sema provides a coherent and comprehensive set of methodologies to cover all the aspects of Baan system integration:

- Business Practice Logistics is used to audit the existing business processes in order to identify the major dysfunctions and the "hidden needs" of their customers
- Business Process Re-engineering can focus on those areas where major dysfunctions have been identified; this will narrow the perimeter of the BPR activities, leading in turn to a more cost-effective Baan implementation
- Change Management complements the technical implementation work and takes into account the cultural and people aspects of the information system to ensure appropriate people motivation and training along with effective data migration.

© 1998 by INPUT. Reproduction Prohibited

The experience Sema has gained from very large technical system integration efforts (e.g., in the energy and defense industry sectors) is a strong risk-reduction factor and a guarantee of Sema's ability to effectively master complex systems. Thanks to this unique expertise and their world-wide coverage, Sema Group can support Baan implementation projects for large international organizations on a fixed-price basis - on time and on budget.

In addition to implementation services, Sema Group can outsource the resulting information system at different operational and geographical levels.

Ongoing Support Offerings

Sema Group's ongoing support offering is based on their experience in outsourcing large information systems. Their support approach is linked strongly to their pricing approach, and is based on a commitment to the project business objectives. Taking into account their customer's environment and culture, they can propose innovative means to transfer the necessary system know-how to the customer's IT team. Such a transfer may include, for instance, the setting up and running of a competence center staffed by both customer and Sema Group IT specialists. By running such a joint competence center, Sema helps their customers reach their business performance objectives while, at the same time, reducing their risks when they want to take over full responsibility for running their system.

In other cases, Sema can provide a global outsourcing capability to help their customers focus on their business while leaving the responsibility of maintaining and running their IT systems to Sema Group specialists.

In every circumstance, Sema is dedicated to their customer's satisfaction and to achieving the client's long-term business objectives.

Pricing Approaches

The majority of Sema Group's Baan implementations are based on a fixed-price contract in order to guarantee system delivery on-time and on-budget and to foster long-term partnerships.

Sema is also ready to consider opportunities to commit themselves to achievement of the customer's business objectives - not only technical achievements - in a risk-sharing/reward-sharing scheme. However, this type of commitment implies that Sema has the ability to run all the phases of their methodology, from business process auditing to change management.

© 1998 by INPUT. Reproduction Prohibited

Vertical Market Competencies

Sema Group focuses their Baan implementation activities in the following discrete manufacturing industry sectors:

- Aerospace
- Automotive
- Electrical and Electronics
- Mechanical engineering

In all of these sectors, Sema Group has a strong track record which gives them an understanding of the customer's requirements, the market environment and best business practices.

Exhibit 1 details Sema Group's participation in seven broad market categories, in terms of the level of consulting or implementation involvement (e.g., consulting with the client, who will then perform the implementation, or implementing the Baan system for the client).

Exhibit 1

Level of Vertical Market Involvement, by Activity

Vertical Market	Consulting	Implementation
Aerospace & Defense	High	High
Automotive	High	High
Process Industries	Low	Low
Hybrid	Medium	Medium
Project Industries	Medium	Medium
Electronics	High	High
General Manufacturing	Medium	Medium

Source: Sema Group

Strategic Positioning

Sema Group sees the following as their main competitive differentiators/strengths:

- Their ability to integrate the supply chain for the whole perimeter of impact of the company
- Their own methodology for supply chain analysis, business process re-engineering, and change management
- The ability to manage complex and large projects and to deliver performance on-time and on-budget
- Their "know-how" transfer through the customer's competence center
- Their skills in transformational outsourcing.

© 1998 by INPUT. Reproduction Prohibited

Plans for the Future

European plans or objectives for the near future include Sema Group's development of competence centers in the major European countries. These centers will be able to provide global services across Europe, as well as local support, including consultancy, systems integration and outsourcing.

Sema's initial focus is on the following countries where Sema Group can already provide a strong support team for their customers: Belgium, France, Italy, Netherlands, Spain, Sweden, Switzerland, and the United Kingdom.

Selected Customer Projects

Sema currently has four Baan project customers in Europe. They are noted in Exhibit 2.

Exhibit 2

Sema Group References

Baan Customer	Industry	Project Details
SNECMA	Aerospace	(see Case Study)
TechSpace	Aerospace	Same services as SNECMA (one site)
Gildemeister	Automotive	Baan installation and system outsourcing
Otis	Mechanicals	Baan installation and system outsourcing

Source: Sema Group

© 1998 by INPUT. Reproduction Prohibited

Case Study:

SNECMA

SNECMA is a world-leading manufacturer of aircraft engines for the civil and military markets. The company supplies engines for the Boeing and Airbus planes operated by a large number of airlines, the French air force's Mirage and Rafale aircraft, and numerous other defense forces world-wide. SNECMA has appointed Sema Group as prime contractor for a project to redesign its business processes and build a new integrated information system. Sema Group's prime contract is worth some $30 million dollars. A strong commitment to budget, timescales and contract performance, with shared risks and rewards, underpins this effective partnership with SNECMA.

This strategic project will enable SNECMA to improve profitability and enhance its competitive position, while at the same time improving the quality of the services it offers to customers. SNECMA is investing some $65 million dollars in the overall program, which will involve 8,000 staff at eight different locations - making it one of the largest projects of its kind in Europe.

Sema Group has overall responsibility for the design and implementation of the project, as well as the management of all the teams. The teams include Sema Group, SNECMA and a number of sub-contractors including Baan France - who are supplying Baan's Enterprise Resource Planning (ERP) system, which manages a number of areas including purchasing and stocks, manufacturing, assembly, distribution, finance and cross-functional processes.

Sema Group's systems integration role will involve optimizing business processes and structures, implementing and integrating sophisticated software packages, procuring both hardware and software, ensuring data integrity and migration, and developing a comprehensive change management program.

The project is due to roll out from 1998 to the end of the year 2000.

© 1998 by INPUT. Reproduction Prohibited

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

June 1997

SG2 Group

Les Miroirs - Cedex 107
92978 Paris - La Defense
France
Tel: +33 1 41 45 10 10
Fax: +33 1 41 45 10 20
Internet: www.sg2.fr:5000

President and Managing Director:	Georges Grima
Status:	Subsidiary
Employees:	1,200
Revenue:	FF 1,102,000,000
Fiscal Year End:	12/31/96

Key Points

- SG2, one of the top 20 French information services companies, is a subsidiary Société Générale and derives a major portion of its revenue from the banking and finance sector.
- During the 1990s, the group has divested nondomestic activities and concentrated its activities around technologies and services relating to payment systems and electronic funds transfer.
- In 1996, SG2 transferred its systems engineering division to SOPRA for a share in this company. The deal marked the start of a close partnership between the two companies.

Company Description

SG2 was formed in 1970 to support Société Générale in its deployment of information technology. However, the group soon began to offer its services to other banks and later to other industry sectors.

SG2 specializes in document processing services, value-added network services, information databases, and facilities management.

© INPUT 1997. Reproduction prohibited.

All brand names and product names are acknowledged to be trademarks or registered trademarks of their owner.

Operations and Structure

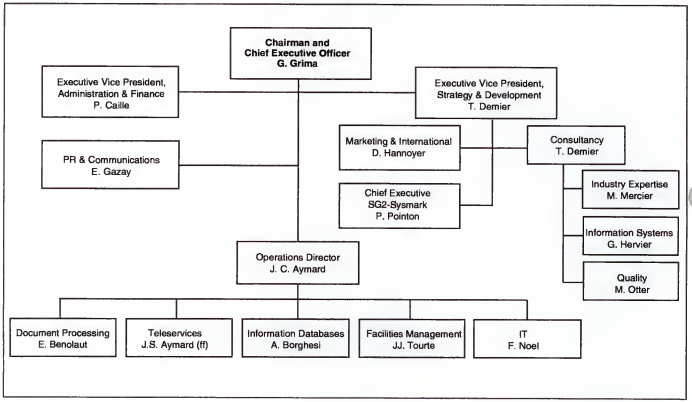
SG2 is a subsidiary of Société Générale through the financial holding company Geninfo.

Until 1996, SG2 was structured in two divisions: Information Systems Engineering and Services. However, with the transfer of its IS Engineering arm to SOPRA in 1996 (see the "Acquisitions/Divestitures" section), the group is now concentrating on its services activities.

Exhibit 1 provides an overview of SG2's organization for 1997.

Exhibit 1

SG2 Group
Organization 1997



Source: SG2

Company Strategy

SG2's strategic directions were set in 1994 and are still the foundation for the group's growth strategy.

SG2 will continue to focus on developing its position in the French banking and finance market while leveraging its expertise and capabilities in this marketplace to other growing niche markets. The company has developed strong know-how in services and technologies surrounding electronic payment systems. Electronic commerce and payments will continue to be the key focus area of the group.

The group has in recent years consolidated its operations in France. However, SG2 will still undertake projects of an international or global nature in cooperation with partners, such as

©INPUT 1997. Reproduction prohibited.

France Telecom, KPMG Peat Marwick Consultants, and IBM.

In early 1996, SG2 further strengthened its operations by establishing a consulting unit dedicated to large projects.

Acquisitions/Divestitures

In November 1996, SG2 acquired SYSMARK DBS, a French company specializing in database marketing. SYSMARK, now a division of SG2, generates revenues of around 50 million francs. No terms of the acquisition were disclosed.

In March 1996, SG2 sold its systems engineering division, consisting of SG2 Ingenierie et Integration de Systemes, E3S and SG2 Benelux, to SOPRA, a Paris-based systems house. The engineering division had 650 employees and 320 million francs in revenues in 1995. In return, SG2's holding company, Geninfo, received a 16% share in SOPRA.

The agreement with SOPRA is one step in the consolidation process that SG2 has gone through during the 1990s. In 1994, the group reduced its stake in SG2 Hungary to 15% and in 1993, SG2's Spanish operations ceded trading.

At the end of 1995, SG2 sold its 51% stake in the management consultancy Orgaconseil.

Financials

Exhibit 2 provides a financial summary of SG2's revenues for the past five financial years.

Exhibit 2

SG2 Group
Five-Year Financial Summary

Year	1992	1993	1994	1995	1996
Revenue (FF Millions)	1,074	1,140	1,139	1,226	1,102
Revenue ($ Millions)	$207	$219	$219	$236	$212
Percent change from previous year	3.5%	5.8%	0%	7.8%	-10% y
Net Income after Taxes (FF Millions)	13.3	31	38	30	N/A
Net Income after Tax ($ Millions)	$2.6	$6.0	$7.3	$5.8	N/A
Revenue per Employee (FF Millions)	N/A	0.603	0.633	0.721	0.918
Revenue per Employee ($ Millions)	N/A	$0.116	$0.122	$0.139	$0.177

Exchange rate used: 5.2 FF to 1 U.S.$ *Source: SG2*

Revenue growth from 1995 to 1996 is 5.4% when adjusted for the effect of divestitures.

©INPUT 1997. Reproduction prohibited.

Market Analysis

Exhibit 3 shows SG2's revenue by industry sector as provided by the company.

Exhibit 3

SG2 Group
Revenue by Industry Sector, 1996
($ Millions)

Industry Sector	Revenue ($ Millions)	Percent of Total
Banking/Finance	91	43%
Government & Public Services	86	41%
Manufacturing	20	9%
Other	15	7%
Total	$212	100%

Source: SG2

A large part of SG2's revenue originates from contracts undertaken from Société Générale, the group's parent company. INPUT estimates that captive revenues are approximately 35% of total revenue.

Exhibit 4 provides INPUT's estimates of SG2's non-captive revenue by service mode.

Exhibit 4

SG2 Group
Revenue by Service Mode, 1996
($ Millions)

Service Mode	Revenue ($ Millions)	Percent of Total
Outsourcing	33	25%
Network Applications	29	21%
Professional Services	28	20%
Processing Services	23	17%
Systems Integration	15	10%
Application Software Products	10	7%
Total Software & Services	$138	100%

Percentages are rounded. *Source: INPUT Estimates*

Geographic Markets

INPUT's estimates of SG2's revenue by country are shown in Exhibit 5.

Exhibit 5

SG2 Group
Revenue by Country, 1996 ($ Millions)

Country	Revenue ($ Millions)	Percent of Total
France	206	97%
Italy	4	2%
Belgium/Luxembourg	2	1%
Total Software & Services	$212 (a)	100%

Source: INPUT Estimates

a) The estimates reflect SG2's transfer of operations to SOPRA in 1996.

©INPUT 1997. Reproduction prohibited.

Key Products and Services

The following is an overview of SG2's service offerings by major area.

Consulting
At the end of 1996, SG2 had 25 consultants in this group. The group was created after SG2 parted ways with Orgaconseil. The consulting division originally dealt with internal projects but is now taking on board assignments for external customers. SG2's consulting services are mainly involved in projects of a financial character, such as payment systems and the implementation of a single European currency. However, services also include assessment of implementation of new technologies and systems.

Processing Services
SG2 offers a range of processing services centered on financial and banking services and electronic funds transfer. These include handling check and card payments as well as other document transactions involved in electronic payment systems. SG2 is leveraging its expertise in the financial sector into other relevant industry sectors and electronic commerce in general.

Teleservices
SG2 is developing services, particularly for electronic payment systems, based on Internet and intranet technologies. In 1996, the group announced a service for handling encrypted payment on the Internet, called SG2-Payline. Other services in this category include developing and hosting Internet Web sites and multimedia development projects. In April 1996, the group announced that it had developed a subscriber-based service, Infonie, which provides access to a large range of electronic services. Infonie is built on the French Minitel technology.

The Teleservices division also offers services such as management of loyalty cards, and handling back-office card services for banks.

Facilities Management
SG2's facilities management-related services include:

- Consultancy and audit
- Network management
- Center management
- Operation audit
- Third-party software management
- Call centers

Originally offered to banks and financial institutions, SG2's FM services are now also marketed to other industries in which the group believes it can leverage its expertise and skills.

Information Databases
This division offers services involving the production, processing, and distribution of strategic information. SG2 has capabilities in legal, economic, commercial, and geographical information databases.

Through SG2-SYSMARK, the group offers services such as:

- Compilation and management of marketing databases
- Management of all logistical operations involved in direct marketing

©INPUT 1997. Reproduction prohibited.

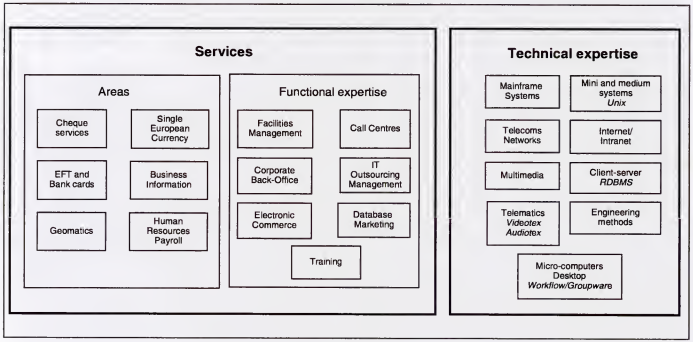
New Service Offerings
Recent SG2 offerings launched in 1997 include:

- SG2-Euroflux—The group's integrated service offering for the European single currency. The offering integrates consulting services for initial analysis, project planning and management, and implementation of necessary changes to existing systems or development of new systems.
- Mediacheque, which assists banks and financial institutions in developing loyalty programs targeted at large clients. The offering is based on imaging technology.

SG2 has created 22 competence centers to support its consultants and engineers, as depicted in Exhibit 6.

Exhibit 6

SG2
Competence Centers



Source: SG2

Clients

In February 1997, SG2 announced that the electronic commerce consortium e-COMM (consisting of BNP, la Société Générale, Credit Lyonnais, France Telecom, Gemplus, and Visa International) had selected a proposal from IBM, MSI, and SG2 as the platform for realizing a pilot project on electronic payment. SG2, as the lead company, will supply expertise in electronic payment transfer and administration of the systems. IBM supplies its CommercePOINT family of products, including security products, while MSI is responsible for adapting the system to specific French issues.

Exhibit 7 provides a selection of other major SG2 reference customers.

©INPUT 1997. Reproduction prohibited.

Exhibit 7

SG2 Group
A Selection of Major Clients

Industry Sector	Clients
Banking and Finance	Generale de Banque Caisse d'Epargne Credit Agricole Banque Indosuez Société Générale Socogefi Sogen Fiditalia
Government and Public Services	Chambres de Commerce et d'Industrie EDF-GDF (French Gas and Electricity) Infogreffe Telematique La Poste Ministere du Travail et des Affaires Sociales
Telecommunications	British Telecom France France Telecom
Manufacturing	Elf Aquitaine Hewlett-Packard Kone Peugeot Renault Schlumberger

Source: SG2

Alliances

SG2 has partnerships in place with a number of software, hardware, and services vendors. The group has concentrated its activities over the past five years and now has a more focused approach to the market, also in terms of geographical coverage. This has increased the importance of strong partnerships for SG2.

SG2's alliance partners include:

- Lawson
- qad
- Softlab
- Oracle
- IBM
- France Telecom
- PeopleSoft
- Microsoft
- Sybase
- Software AG
- KPMG
- IMS

©INPUT 1997. Reproduction prohibited.

INPUT Assessment

SG2 has stated that it intends to become the market leader in the French banking and finance sector. Nevertheless, in recent years the group has consolidated its operations dramatically. In light of the formation of Atos from the merger of Axime and Sligos, which both held strong positions in the banking and finance sector, gaining market leadership could prove to be a hard task for SG2.

However, SG2 could possibly hold a dominant position in certain niches of the banking and finance sector based on its expertise in electronic payment systems. The group is likely to continue to expand into wider issues around electronic commerce as illustrated by the bid for the e-COMM pilot projects. SG2 could be a strong player in this part of the IT market.

© 1997 by INPUT. Reproduction Prohibited.

INPUT

SHARED FINANCIAL SYSTEMS, INC.

15301 Dallas Parkway
Suite 600
Dallas, TX 75248
Phone: (214) 233-8356
Fax: (214) 458-3876

President & CEO:	Michael Faherty
Status:	Private Company
Total Employees:	170 (3/93)
Total Revenue:	$21,000,000*
Fiscal Year End:	3/31/93

* INPUT estimate

Key Points

- Shared Financial Systems' transaction processing software products are now available for UNIX, as well as fault tolerant computer environments.
- Shared Financial Systems has developed an open systems on-line transaction processing (OLTP) application development "engine", a network/gateway communications platform, and a client/server transaction network.
- The company has unbundled its products into modules that are available separately based on the requirements of its bank, financial services, retail, pharmacy, and health care clients.

Copyright 1993 by INPUT. Reproduction Prohibited.

Company Description

Shared Financial Systems, founded in 1982, provides transaction processing software products used by banks, financial services firms, retailers, pharmacies, health care providers, and other companies for business-critical applications or UNIX-based connectivity and development platforms.

The company also provides custom programming, systems integration, and related consulting and support services.

Shared Financial Systems' products are installed at 325 sites in 44 countries on six continents.

Company Strategy

Shared Financial Systems' strategy is to provide its products and services to targeted vertical markets to ensure that each customer attains higher profits while providing greater convenience to their customers.

Financials

Shared Financial Systems' fiscal 1993 revenue reached an estimated $21 million, a 19% increase over fiscal 1992 revenues.

Competitors

Major competitors include ACI and Deluxe Data Systems.

Key Products and Services

Approximately 60% of Shared Financial Systems' fiscal 1993 revenue was derived from applications software and connectivity products and 40% from consulting and other services.

The company currently offers its products on two software development platforms as follows:

- *ON/2*® for Stratus, IBM System/88, and Olivetti CPS/32 fault tolerant computers operating under VOS
- *ON/X*™ for open systems computing on computers such as the IBM RS/6000, Sequent, and NCR 3000 series UNIX-based systems

Current applications software packages include the following:

- *Electronic Payments* authorizes credit and debit transactions, verifies checks at the point-of-sale (POS), and captures sales draft information electronically through electronic draft capture (EDC). The software allows users to control their costs while broadening their customers' payment options.

Copyright 1993 by INPUT. Reproduction Prohibited.

- *Electronic Banking* drives all manufacturers' ATMs as well as switch transactions through regional, national, international, and proprietary networks and/or host mainframes. The software assists users in improving the reliability and profitability of their customer-activated and electronic funds transfer (EFT) transactions.

- *Check Management* verifies checks on a positive or exception basis and authorizes ACH, or "electronic" checks, supports tracking of returned checks, and accesses a centralized customer information file.

- *Electronic Pharmacy Claims* helps control the costs and losses associated with real-time acceptance of insurance claims for prescription payment by authorizing claims via an in-house data base or through third parties. It also provides claim field editing and verifies whether the cardholder, prescribing doctor, and drug(s) are eligible before dispensing.

- *Online Pharmacy Adjudication* supports on-line pricing, co-payment, and benefits tracking to ensure that health claims are accurate, cost less to submit, and eligible for prompt reimbursement.

- *Drug Utilization Review* uses the patient's health profile and prescription drug history to notify the pharmacist of drug-to-allergy, and drug-to-drug interactions.

- *Customer Relationship Marketing* provides a variety of customer loyalty incentive programs for retailers. These programs include frequent shopper, target marketing, and managing a marketing data base of customer demographic and buying information.

- *Data Delivery* electronically transfers POS data to a central location and downloads information to retail stores either individually, collectively, or in groups in support of data collection, data distribution, and messaging functions.

- *Card Management* provides users with a centralized customer information facility for card base management, PIN maintenance, and management of card mailers for ATM, credit, frequent shopper, and check cashing cards.

- *Sweepstakes* manages the electronic promotion, maintains prize parameters, and verifies eligibility criteria for electronic sweepstakes programs. These programs are used to entice more customers to use electronic services or to increase patronage.

- *Electronic Medical Claims* pre-edits claims, validates proper diagnoses and procedures, checks provider and member eligibility,

Copyright 1993 by INPUT. Reproduction Prohibited.

can be configured to support any claim format or standards, and electronically submits claims on-line or via batch transmissions. The re-entry of data on a provider-by-provider basis is curtailed since carrier specifications and patient information are centralized, also permitting on-line inquiries by providers as to the status of claims.

- *Electronic Medical Benefits* verifies the eligibility of insurance claims on-line using a hierarchy of member, plan, and group information. Benefits coverage information is also provided.

Industry Markets

Approximately 55% of Shared Financial Systems' worldwide revenue was derived from the banking and financial services industries, 30% from retailers, 10% from pharmacies/health care companies, and 5% from other sources.

Clients

Major clients include four of the world's top five credit card companies, six of the world's top 12 banking institutions, six of the top 10 U.S. retail drug chains (including 40% of all U.S. retail drug chains), and 50 of the world's leading retail organizations, health care transaction processors, and insurance payers and providers.

Geographic Markets

Of its installed base, approximately 45% of the installations are in the U.S. and 55% are outside the U.S.

Shared Financial Systems is headquartered in Dallas and has additional offices in New York, Atlanta, Memphis, Chicago, and North Carolina.

In the U.S., Canada, and Mexico, the company's products are marketed by a direct sales force, OEM partners, VARs, and sales agents. Outside the U.S., products are marketed and serviced by 27 distributors worldwide.

Copyright 1993 by INPUT. Reproduction Prohibited.

SHARED FINANCIAL SYSTEMS, INC.
15301 Dallas Parkway
Suite 600
Dallas, TX 75248
(214) 233-8356

Richard Streller, President and CEO
Private Company
Total Employees: 170 (11/90)
Total Revenue, Fiscal Year End
3/31/91: $21,000,000*

*Company estimate

The Company

Shared Financial Systems, founded in 1982, provides transaction processing software products used by banks, financial services firms, retailers, and pharmacies/health care providers for critical applications that operate 24 hours a day, 7 days a week. The company also provides custom programming and related consulting professional services.

The company's strategy is to provide its products and services to targeted vertical markets to ensure that each customer attains higher profits while providing greater convenience to their customers. Shared Financial Systems' products are installed at more than 270 sites in 36 countries on six continents.

It is estimated that Shared Financial Systems' fiscal 1991 revenue will reach $21 million, a 40% increase over fiscal 1990 revenue of $15 million. The company has averaged an annual growth rate of over 40% during the past five years and has operated profitably since 1988.

Major competitors include ACI, Leroux-Pitts, Deluxe Data Systems, and SDM.

Key Products and Services

INPUT estimates approximately 75% of Shared Financial Systems' fiscal 1990 revenue was derived from application software products and 25% from consulting and custom development professional services.

Shared Financial Systems currently offers three families of application software products which operate on Stratus XA2000 Series, IBM System/88, and Olivetti fault tolerant computers under the VOS operating system. All system modules are designed for versatility and connectivity by being host, protocol, and device independent.

Copyright 1991 by INPUT. Reproduction Prohibited.

- ON/2: Financial Transaction System, introduced in 1983, is designed to generate fee-based income for financial institutions and services companies. There are currently over 260 clients using ON/2. The system's modules include the following:

 - Electronic Banking Services modules include ATM (acquirer), Card Management, Manned Teller, Credit Authorization (user), Switch, Debit (authorizer), and Sweepstakes.

 - Merchant Transaction Services applications include Credit Authorization (acquirer), Check Verification, Electronic Draft Capture, Shopper Data Collection/Direct Marketing, Electronic Check, Frequent Buyer, Credit Authorization (private label), Card Management Service, Debit, Returned Check Tracking, and Electronic Data Interchange.

- StoreNet/2: Retail Transaction System, introduced in 1988, is designed to help retailers profit through transaction processing. Modules include the following:

 - Electronic Payments modules include Private Label Credit Authorization, Check Verification, Debit, Credit Authorization (acquirer), Electronic Draft Capture, and Electronic Check.

 - Customer Management modules include Card Management, Returned Check Tracking, Sweepstakes, Shopper Data Collection/Direct Marketing, and Frequent Buyer.

 - Data Delivery modules include Polled Data Collection, Trickle Data Collection, Messaging, Polled Data Distribution, Trickle Data Distribution.

 - Electronic Banking Services modules include ATM and Point of Banking.

 - EDI offers translation and document mapping tools to serve as a gateway for inbound and outbound EDI traffic.

- HealthNet/2: Pharmacy Transaction System, introduced in 1988, is designed to help retail pharmacies profit from transaction processing. Modules include the following:

 - Electronic Claims modules include Claim Eligibility Verification, Online Adjudication Support, and Third Party Claim Delivery.

 - Drug Utilization Review provides electronic files to help

Copyright 1991 by INPUT. Reproduction Prohibited.

pharmacists detect drug interactions, improper dosage, and therapeutic abuses.

- Electronic Payments modules include Private Label Credit Authorization, Check Verification, Debit, Credit Authorization (acquirer), Electronic Draft Capture, and Electronic Check.

- Customer Management modules include Card Management, Returned Check Tracking, Shopper Data Collection/Direct Marketing, and Frequent Buyer.

- Data Delivery modules include Polled Data Collection, Trickle Data Collection, Messaging, Polled Data Distribution, Trickle Data Distribution.

- EDI offers translation and document mapping tools to serve as a gateway for inbound and outbound EDI traffic.

Custom development services generally include modification of Shared Financial Systems' software for certain clients.

Industry Markets

INPUT estimates approximately 45% of Shared Financial Systems revenue was derived from the banking and finance industry, 35% from retailers, and 20% from pharmacies.

Major clients include the four top credit card providers, five of the world's top 10 banking institutions, seven of the top 12 retail drug chains, and over 30 of the leading retail organizations.

Geographic Markets

Approximately 52% of Shared Financial Systems' fiscal 1990 revenue was derived from the U.S. and 48% from royalties received from sales through distributors outside the U.S.

Of its installed product base, approximately 50% of the installations are in the U.S. and 50% outside the U.S.

Shared Financial Systems is headquartered in Dallas and has additional offices in San Francisco and Los Angeles (CA), New York, Greenwich (CT), Boston, Charlotte, Memphis, Chicago, and Australia.

In the U.S., Canada, Mexico, Australia, and New Zealand the company's products are marketed by a direct sales force. Outside the U.S., the company's products are also marketed by 15 distributors.

Copyright 1991 by INPUT. Reproduction Prohibited.

COMPANY BRIEF

Primary Industry-Specific Market: Banking and Finance

Shared Financial Systems
15301 Dallas Parkway, Suite 650
Dallas, TX 75248
(214) 233-8356

CEO: William McCormick, President
Private Company
Founded: 1982

Employees: 100 (10/86)
Revenue (FYE 3/31/86): $7 million*

The Company: Shared Financial Systems provides application software products and associated services for the banking and finance industry. In 1986, the company also began marketing its products and services to retail distributors

Sources of Revenue:
- Application Software (100%)

Key Products:
- Application Software Products
 - In 1984, Shared Financial Systems and Pacesetter Systems Inc. merged resources and introduced the PACER line of transaction processing software for IBM and compatible mainframes. PACER applications included a retail transaction system supporting ATMs, POS devices, and other on-line terminals (PACER ON/2); a customer information file system; a combined deposit system; an on-line inquiry system for improved customer services; and an on-line host processing support system.
 - Shared Financial Systems has developed a new family of products stemming from ON/2 and is shifting emphasis away from the PACER line. The company will continue to provide support for PACER products
 - The new line of products run on IBM System/88 and Stratus 32 computers and includes the following:
 - ON/2 ATM is an on-line processing system for ATMs and switching. ON/2 ATM functions as a front-end processor or a back-end switch.
 - ON/2 Electronic Delivery System includes EFT/POS credit, debit, proprietary card authorization and processing. The system also includes ACH interface, check verification and guarantee, and POS device support.
 - ON/2 Manned Teller supports financial institutions' manned teller requirements.

*INPUT estimate

©1986 by INPUT. Reproduction Prohibited.

- ON/2 SWITCH provides gateways for various EFT networks including national, regional, and local networks.
- ON/2 Network Control provides maintenance and on-line control of an EFT network.
- ON/2 Host Interface provides integration and communications with multiple host mainframe computers.
- ON/2 VISANet provides direct interface into VISA's debit card system.
- ON/2 Corporate Cashiering provides 24-hour-a-day corporate cashiering functions including cashing expense checks and payroll checks, and providing instant cash, credit card advances, and petty cash.

Target Industries:
- Banking and finance (100%)

©1986 by INPUT. Reproduction Prohibited.

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1996

Shared Medical Systems Corporation

Chairman: R. James Macaleer
President & CEO: Marvin S. Cadwell
51 Valley Stream Parkway
Malvern, PA 19355
Phone: (610) 219-6300
Fax: (610) 219-3124
Internet: http://www.smed.com



Status:	Public
Employees:	4,826 (12/95)
Revenue:	$650,641,000
Fiscal Year End:	12/31/95

Key Points

- Shared Medical Systems Corporation (SMS) is the leading provider of health information service and system solutions worldwide.
- In March 1996, SMS introduced NOVIUS™, a new family of client/server health information systems.
- In August 1995, R. James Macaleer resigned as Chief Executive Officer of SMS, retaining his position as Chairman of the Board. Marvin S. Cadwell, the former President and Chief Operating Officer has succeeded him, holding the positions of President and Chief Executive Officer.
- In 1995, the company formed a new division, the Outsourcing Services Division (OSD), providing software, information processing, personnel management, and technical support.

© INPUT 1996. Reproduction prohibited

- During 1995, SMS introduced a range of new products, including the client/server Laboratory Management and Radiology Management Systems, a Medical Image Management System, a client/server General Financial System, and expanded offerings for physician offices and ambulatory care settings.

Company Description

Shared Medical Systems Corporation and its subsidiaries provide computer-based information processing systems and related services to the health industry in North America and Europe.

SMS' health information systems provide clinical, financial, administrative, ambulatory care, managed care, decision support, and EDI systems for both the public and private health sectors. The company's range of products and services are provided to hospitals, multi-entity health care corporations, physicians groups, and other health care providers.

The health information systems and related services are offered on computers ranging from PCs to minicomputers to mainframes, operating at the client's site, at SMS' Information Services Center, or as part of a distributed network.

In addition, SMS offers a variety of professional services including system installation, support, and education. The company also provides specialized consulting services for software and network customization, facilities management, information systems planning and integration, and system-related process re-engineering.

Founded in 1969, SMS became a publicly held corporation in 1976.

Organization and Structure

SMS is currently organized into the following divisions:

- The MedSeries4 Division, formerly GTE Health Systems, is located in Salt Lake City (UT). This division provides a core set of health care applications on an IBM AS 400 platform. MedSeries4 offers both clinical and financial applications.

- The Outsourcing Services Division (OSD), provides software, information processing, personnel management, and technical support. During the end of 1995 and the beginning of 1996, OSD had contracts with seven customers for more than $200 million of services over the next ten years.

- The Clinical Support Systems division provides laboratory information systems, radiology management systems, medical imaging systems, and a pharmacy management system.

- The Turnkey Systems Division supports the marketing, sales, service, and development of the ALLEGRA HIS.

- Health Solutions provides systems and services to meet the information requirements of the health industry. Health Solutions offers people and resource systems, clinical systems, enterprise solutions, accounting solutions, and management solutions.

- The Strategic Services Group provides a range of information systems, planning, implementation, and consulting services.

- Network Services provides network planning, design, installation, and support services.

© INPUT 1996 Reproduction prohibited.

- SMS Europe provides systems and services to more than 700 customers in 12 European countries. SMS Europe has administrative offices in Basingstoke (England), and operating companies in Belgium, France, Germany, Hungary, Ireland, Italy, the Netherlands, Spain, and the U.K.

- The Information Services Center is located in Malvern (PA), and provides on-line connections to more than 650 customers for remote processing.

Healthcare Data Exchange (HDX), formed in 1993, is an SMS company that provides a system for the electronic interchange of health care data among providers, payers, and others involved in the health industry.

SMS currently has contracts with customers in 47 states, the District of Columbia, and Puerto Rico. The company also has hospital contracts in Belgium, the Czech Republic, France, Germany, Hungary, Ireland, Italy, Luxemburg, the Netherlands, Poland, Spain, and the U.K.

U.S. branch offices are located in the metropolitan areas of Ann Arbor (MI); Atlanta (GA); Boston (MA); Charlotte (NC); Chicago (IL); Cleveland and Columbus (OH); Dallas (TX); Denver (CO), Indianapolis (IN); Kansas City (KS); Los Angeles, Oakland, San Francisco, and Santa Barbara (CA); Miami (FL); Nashville (TN); New Orleans (LA); New York (NY); Philadelphia and Pittsburgh (PA); Salt Lake City (UT); Seattle (WA); and St. Louis (MO). The company also has an office in San Juan (Puerto Rico).

Four educational and training centers are located near Philadelphia, Chicago, Fort Lauderdale, and San Francisco.

Company Strategy

SMS is positioning itself to be the leading provider of regionally based integrated health care network (IHN) delivery systems.

The company is focusing on providing enabling technology for managed care within and across health care enterprises.

- SMS' combined strengths in health care information systems solutions, network and database integration, outsourcing, network services, and strategic consulting services help provide not only the ability to implement integrated health care delivery systems, but also to manage them on an outsourcing basis.

- A significant strategic direction of the company is also to establish world class alliances to better serve customer needs.

- The company's strength in working with distributed processing solutions—which can involve a combination of remote processing at its Information Systems Center combined with client-based processing—has helped the company develop interface tools to provide multivendor product integration as well as integrating multiple database structures for developing computer-based electronic medical records.

Financials

SMS' 1995 revenue reached $650.6 million, an 18% increase over 1994 revenue of $550.8 million. Net income reached approximately $39.8 million, a 13% increase over net income of $35.1 million for 1994.

A five-year financial summary is shown on the following page.

© INPUT 1996 Reproduction prohibited.

Shared Medical Systems Corporation
Five-Year Financial Summary
($ Millions, except per-share data)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	$650.6	$550.8	$501.3	$469.6	$438.7
• Percent change from previous year	18%	10%	7%	7%	9%
Income before taxes	$65.2	$57.5	$51.7	$45.0	$39.5
• Percent change from previous year	13%	11%	15%	14%	17%
Net income	$39.8	$35.1	$31.0	$28.4	$25.3
• Percent change from previous year	13%	13%	9%	12%	12%
Earnings per share	$1.68	$1.51	$1.35	$1.24	$1.11
• Percent change from previous year	11%	12%	9%	12%	10%

Revenue growth was attributed to strong sales of SMS HIS systems and expansion efforts in Europe.

Research and development expenditures were approximately $45.4 million in 1995, compared to $39.2 million in 1994, and $37.1 million in 1993. In all three years, expenditures were approximately 7% of revenue

Revenue Analysis by Product/Service

Service and system fees revenue was $592.5 million in 1995, an increase of approximately 18% over 1994. Hardware sales revenue increased 25%, to $58.3 million in 1995.

A three-year source of revenue summary by product/service, as reported by SMS, is shown on the following page.

Increases in service and system fees revenue were attributed to the following:

- Higher levels of professional services, primarily in system support, installations, and consulting
- Increased system processing fees due to an increase in Information Services Center customer applications
- Growth in system sales
- Revenue from the MedSeries4 Division, acquired in September 1994
- The acquisitions of two businesses in Europe during 1995

Increases in hardware sales were primarily attributed to the change in timing and product mix of systems installed.

© INPUT 1996 Reproduction prohibited.

Shared Medical Systems Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Service and system fees	$592.5	91%	$504.4	92%	$452.8	90%
Hardware sales	58.1	9%	46.4	8%	48.5	10%
Total	$650.6	100%	$550.8	100%	$501.3	100%

Interim Results

Revenue for the three month period ended March 31, 1996, was approximately $170.4 million, an increase of 17.2% over the same period the previous year. Net income for the period was $10.8 million, a 13% increase over net income of $9.6 million for the same period in fiscal 1995.

Market Financials

Virtually 100% of SMS' 1995 revenue was derived from the health services industry.

SMS' primary markets are acute-care (short-stay) hospitals, generally with 100 or more beds, multi-entity health care corporations, physicians groups, and other health care providers.

SMS' products are offered to hospitals of all types (urban, teaching, suburban, rural, specialty), proprietary hospital companies, and non-for-profit multihospital groups. The company's products are also offered to health care organizations such as clinics, physician group practices, medical schools, public health departments, and home health care organizations.

Geographic Markets

Approximately 86% of SMS' 1995 revenue was derived from North America and 14% from Europe.

A three-year geographic source of revenue summary is shown on the following page.

Acquisitions

In June 1995, SMS purchased Professional Datacare (PDC), a provider of financial processing services to health organizations in the U.K. The company was acquired from the National Health Service's North West Regional Health Authority in the U.K. for approximately $8.5 million.

In 1995, SMS also acquired the health division of Atlas Datensysteme GmbH (ADS), a provider of patient management and financial systems in Germany, for $3.6 million.

© INPUT 1996 Reproduction prohibited.

Shared Medical Systems Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
North America (a)	$557.9	86%	$480.1	87%	$439.3	88%
Europe (b)	92.8	14%	70.7	13%	62.0	12%
Total	$650.6	100%	$550.8	100%	$501.3	100%

(a) North American operations recorded operating profits of $60.7 million, $52.9 million, and $47.2 million for 1995, 1994, and 1993, respectively.

(b) European operations recorded operating profits of $7.5 million, $6.1 million, and $5.8 million in 1995, 1994, and 1993, respectively.

Employees

As of December 31, 1995, SMS had a total of 4,826 employees worldwide, including approximately 4,000 employees in the U.S., segmented as follows:

Customer operations and support	40%
Research and development	35%
Operations, administration, and marketing	25%
	100%

The company currently has more than 4,800 employees.

Key Products and Services

SMS operates the largest health care network in the U.S., which consists of more than 500,000 miles of communications lines, containing more than 3,000 communication devices, and connections to more than 70,000 customer terminals and printers.

- SMS provides processing services to its clients from its Information Systems Center, which operates 24 hours a day, 365 days a year. The Information Systems Center serves users at more than 650 sites with more than 130,000 terminals, transmitting the equivalent of over 100 million pages of information per day.

- SMS service offerings include:

 - Electronic Data interchange Services
 - Network Services
 - Outsourcing Services
 - Strategic Services
 - Support Services

- SMS offers open system solutions that help customers interconnect the disparate operational systems, products, and technologies of new network members without major changes to any of the individual systems. The SMS interface engine acts as a central communications hub that interfaces any system or

© INPUT 1996 Reproduction prohibited.

application to another using any protocol or data format, including VMS, UNIX, NT, MVS, and DOS-based systems.

- SMS system offerings include:

- Ambulatory Care Information
- Clinical Information
- Financial information
- Home Health Information
- Image Management
- Laboratory Management
- Managed Care Information
- Management Information
- Pharmacy Management
- Physician Practice Management
- Radiology Management

SMS provides more than 100 applications to its clients for financial, administrative, clinical, and decision support applications. A summary of applications is shown in the exhibit on the following page.

SMS INVISION® is SMS' IBM-based software product, which includes clinical, financial, and decision support capabilities. The product is available either for purchase for in-house use, or as a remote processing service. There are currently more than 600 SMS INVISION system users.

CareCenter™, introduced in 1993, is SMS' new family of clinical information applications built on client/server technology using Microsoft Windows graphical presentation and is designed to make patient information readily available to physicians, nurses, and other caregivers at any point along the continuum of care.

- Using CareCenter, physicians and nurses can review and enter vital signs, assessments, and other patient information from a hospital site, clinic, or physician's office, and that information is immediately accessible to other CareCenter users throughout the health care enterprise.

- CareCenter was designed to surround SMS INVISION applications with a common front-end.

Clinical applications available with CareCenter include care protocols, an interface to physiologic monitors, quality management, utilization management, and medical records management. In addition, CareCenter provides access to other PC-based applications such as electronic mail and outside reference data bases, including medical libraries.

Information Solutions

SMS' integrated information solutions include technology, applications, processes, and services in the HIS industry.

Solutions include applications and services for clinical results, orders, laboratory, radiology, pharmacy, nursing, patient registration, medical and document imaging, scheduling, physician's offices, payroll and HR, billing and receivables, managed care, outcomes management, financial reporting, ambulatory care, EDI services, clinical and financial decision making, and executive information systems.

- NOVIUS™ is a new family of client/server information systems offered on a distributed computing architecture with enabling technologies, applications, and services designed to meet the expanding information needs of the health industry.

© INPUT 1996 Reproduction prohibited.

Exhibit
SMS Applications

APPLICATION AREA	APPLICATION AREA
Financial Management	**Clinical Management**
- Inpatient Billing - Advanced Outpatient - Physicians Billing - General Ledger and Statistics - Risk Management - Planning - Marketing Support - Payroll - Time and Attendance - Personnel - Human Resources - On-line Account Management - On-line Cost Accounting Management - On-line Materials Management - Inventory Control - Accounts Payable - Accounts Receivable - Property Accounting Management - Ambulatory Information System - Financial Patient Index - Master Patient Index	- Admissions - Care Planning - Chart Location and Delinquency - Clinic Scheduling - Inpatient Registration - Laboratory: Blood Bank, Chemistry, Anatomic Pathology, Microbiology - Order Processing - Results Reporting - Outpatient Registration - Clinical Data Repository - Clinical Ambulatory Information System - Nurse Staffing - Patient Care Plans - Patient Identification - Resource Scheduling - Pharmacy - Radiology - Reregistration - Dietary - Remote Physician Access - Quality Management
Administration	**Physician's Systems**
- Administration, Planning and Statistics - Census - Comparative Statistics - Discharge Planning - Infection Control - Medical Records - Professional Services - Quality Assurance - Risk Management - Tumor Registry - Utilization Review - DRG Management - Drug Utilization Review - Mortality Rate Analysis - Contract Management	- Architecture - Decision Control - Patient Management - Guarantor/Patient Billing - Insurance Processing - Accounts Receivable - Physician Production Analysis - Advanced Collection Workstation - Medical Records Chart Tracking - Clinical Patient Profiles - Ad Hoc Reporting - Appointment Scheduling
Management Solutions	**Other**
- Executive View - Information Repository - Trend Monitor - Cost Accounting Manager - Performance Manager - Flexible Budget Monitor - INFOSTATION	- HARMONY (LAN product) - Development Office System - Computer-Aided Instruction - Professional Staff Credentialing - OPENLink

© INPUT 1996 Reproduction prohibited.

- Novius.ihn™, the first system in the NOVIUS family, includes a data warehouse, CareCenter™ Workstation, Standard Technology Platform, and people-centered applications.

Health Information Systems

Health information systems and related services offered by SMS are as follows:

- Financial systems—Providing a range of financial functions including patient accounting (including billing and receivables), accounting and financial management, materials management, personnel, and property

- Patient management—Systems assisting in the administration of patient care through specialized programs for various hospital departments, such as admissions, outpatient, utilization review, and medical records

- Clinical systems—Automating many labor-intensive tasks performed in the nursing, radiology, laboratory, pharmacy, and other departments within health organizations

- Ambulatory care systems—Providing integrated systems that facilitate the sharing of clinical and financial information between health providers in non-acute care settings

- Management solutions—Providing access to a range of strategic information collected from the clinical, financial, and patient management systems

- Physician information systems—Providing information processing and administrative support to physician groups, clinics, and medical schools with features such as scheduling, electronic claims processing, automated billing and rebilling, and on-line collections

- Systems for integrated health networks—Including patient indexes for rapid identification of patients in the network, scheduling of network-wide resources, a cumulative electronic patient record, software for managed care issues, and communications facilities for improving communications within the network

ALLEGRA® is an in-house integrated health care information system targeted primarily to community hospitals with 100 to 400 beds.

- The system supports clinical, financial, administrative, and decision support applications.

- ALLEGRA 2000, released in February 1994, offers features such as EDI services for eligibility and referral (through Healthcare Data Exchange); CareRecord™, a lifetime patient data repository; document imaging; and an executive information system.

- ALLEGRA is now available on the UNIX operating systems for a range of platforms, including Digital, HP and IBM RS/6000 systems, as well as Digital VAX VMS environments.

- There are currently more than 100 ALLEGRA clients.

SMS offers its SIGNATURE® product line—a set of physician-group applications for financial, clinical, and administrative functions—to medical groups of various sizes.

- SIGNATURE modules include architecture, decision control, patient management, guarantor/patient billing,

© INPUT 1996. Reproduction prohibited.

insurance processing, accounts receivable management, and physician production analysis.

- Optional applications include advanced collection workstation, medical records chart tracking, clinical patient profiles, ad hoc reporting, and appointment scheduling.

- SIGNATURE is available as an in-house system or as a remote computing option. All configurations operate using IBM and compatible computers under MVS.

- There are currently more than 150 SIGNATURE clients.

Through Delta Health Systems, SMS provides clinical and financial information systems for home health care providers.

- Clinical-Link™ uses a laptop computer in the home where care is administered to streamline field documentation. At the end of the day, each laptop computer automatically calls the file server via a phone line and transmits the clinician's activities. This transmission provides the file server with a copy of the updated chart for each patient.

- Other products/applications offered through Delta include:

 - Billing/statistical accounts receivable
 - In-House Plus
 - HCFA 485, 486, 487 Plan of Treatment
 - Individualized care plans
 - Electronic billing
 - Electronic plan of treatment
 - Medication reporting
 - Payroll
 - Ad-hoc report writer
 - General ledger
 - Word processing
 - Scheduling
 - Electronic charting
 - Hospice benefits
 - Admission/referral
 - Accounts payable

- Delta systems run on IBM PCs and a variety of PC-based UNIX systems, a RISC platform, and can also run on a Novell network.

Electronic Data Interchange Systems

SMS' electronic data interchange systems facilitate the sharing and standardization of information throughout the health industry, including eligibility verifications, claims, and remittance transmissions.

SMS' Healthcare Data Exchange (HDX) subsidiary facilitates the electronic communication of industry standardized information among all parties involved in the health care industry.

Strategic and Network Services

SMS' professional services consist of a variety of activities related to the company's health information processing systems, including installation, support, and education. The company also offers consulting services for the design and integration of software and networks, facilities management, information systems planning, and system-related process reengineering.

Business and professional services include systems installation, integration, and optimization; education and training; outsourcing and facilities management; network design, installation, and monitoring, reengineering of business offices, patient protocols, and medical

© INPUT 1996 Reproduction prohibited.

records; custom programming; and general consulting.

In February 1995, SMS introduced the Network Partners Program to complement health care organization's in-house network operations efforts.

- The Network Partners Program consists of a suite of service options to assist customer swith the management and support of their private enterprise networks.

- Three levels of service are available:

 - The Reference Desk provides network integration support for clients through direct contact with SMS experts.

 - Level Two Remote Monitoring service provides continuous network monitoring to ensure optimum performance, protect against outages and degradation, and to forecast the impact of proposed applications on the network.

 - Network Support offers multivendor network and desktop equipment repair services.

Clients

In 1995, SMS had over 1,700 customers in the U.S., and over 700 in Europe. SMS clients include integrated health networks, multi-entity health corporations, community health information networks (which include payers and employers), hospitals, physician groups, and other health providers in North America and Europe.

Marketing and Sales

Domestically, SMS markets its products and provides installation services and ongoing technical and educational support with a field staff working out of branch offices.

In Europe, SMS markets, installs, and supports its products through local offices in nine countries.

Alliances

SMS has established alliances with networking and telecommunications companies, including AT&T, Novell, Microsoft, MemorexTelex, and Digital.

SMS has also formed the SMS Allied Partner Program as an integral part of its commitment to providing customers with total solutions to their health information system needs.

- SMS has marketing agreements with 20 selected companies (Allied Partners) whereby SMS introduces the Allied Partners' specialized software products and services to SMS customers.

- A sampling of solutions include Health Information Management Systems from SoftMed, Time and Attendance Systems from Kronos, and Electronic Physician Notes Systems from Datamedic.

SMS is the prime contractor for Chin-Alliance, a consortium of eight information systems and telecommunication companies created to provide services to community health information networks. ChinAlliance is responsible for the operation of a CHIN (Community Health Information Network) serving Metropolitan Chicago.

In November 1995, SMS and The General Electric Company announced a collaborative project with the Department of Commerce to further develop information technologies used to capture, integrate, and

© INPUT 1996. Reproduction prohibited.

transmit multimedia medical information across geographically diverse health information networks.

In August 1995, SMS , through the Clinical Support Systems division, and Becton Dickinson and Company, through its Diagnostic Instrument Systems and Microbiology Systems division, announced a cooperative agreement to adapt and market software products for microbiology laboratories.

- The companies are combining Becton Dickinson's experience in infectious disease diagnostics, and SMS' laboratory information systems to maximize information delivery for microbiology labs.
- The focus of the alliance is on software products that will provide improved information access and delivery, systems integration, and enhanced workflow efficiency.

In February 1995, SMS named HealthCare Information Services Inc. to SMS' Allied Partner Program, and will market the company's BiblioMed® electronic medical publications to SMS clients.

In February 1995, SMS and Microsoft formed a Healthcare Development Alliance under which the companies would support one another in the development of products.

Formed in 1993, Delta Health Systems is a 50/50 equity partnership between SMS and Delta Computer Systems, Inc.

- This company provides clinical and financial information systems for home health care.
- Delta Health Systems currently serves over 400 home health customers across the U.S.

Competition

Major competitors of SMS include the following:

- Processing competitors include First Data Corporation and various regional firms.
- Competition from vendors providing in-house systems comes from HBO & Company and Cerner.
- Physicians' services competitors include CyCare and IDX.

Assessment

SMS feels its strengths lie in:

- Its strong customer satisfaction ratings
- Its large customer base
- Its wide range of systems offered on multiple platforms
- Its ability to provide complete solutions to help clients meet their business objectives

© INPUT 1996 Reproduction prohibited.

IT2000

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1994

Shared Medical Systems Corporation

Chairman & CEO: R. James Macaleer
51 Valley Stream Parkway
Malvern, PA 19355
Phone: (610) 219-6300
Fax: (610) 219-3124

Status:	Public
Employees:	3,988 (12/94)
Revenue, 9 mos. ending 9/30/94:	$396,600,000
Revenue, FYE 12/31/93:	$ 501,283,000

Key Points

- Shared Medical Systems Corporation (SMS) is the largest provider of clinical, financial and management information solutions to the health services industry in the U.S. and Europe.
- 1993 marked SMS' 25th year in business. During the year, SMS extended its European operations by opening new offices in France and Italy and established Healthcare Data Exchange—a wholly owned subsidiary providing electronic data interchange (EDI) services.
- In October 1994, SMS acquired GTE Health Systems from GTE Corporation, expanding SMS' product line to include the MedSeries family of integrated information management and communications products and more than 300 health care provider clients.
- SMS' ALLEGRA® Healthcare Information System is now available on the UNIX operating system.
- SMS has also announced the availability of the Client/Server Laboratory Management System as well as outsourcing for laboratory operations.

© INPUT 1994. Reproduction prohibited.

Company Description

SMS provides remote computing, network and distributed processing services; client-site systems operations services; applications software products; turnkey systems; and various professional services—including proprietary network design, custom programming, systems installation and training—for clinical, financial and management information applications. The company's range of products and services are provided to hospitals, multi-entity health care corporations, physicians groups and other health care providers in the U.S. and Europe.

Founded in 1969, SMS became a publicly held corporation in 1976.

Operations and Structure

SMS is currently organized into the following divisions:

- The Hospital Systems Division, SMS' largest business unit, provides network and distributed processing services, applications software and associated hardware to domestic, non-federal hospitals.
- The Laboratory Products Division, formed in early 1988, is dedicated to the development, marketing, delivery and support of hospital clinical laboratory information systems.
- The Turnkey Systems Division, formed in late 1987, is dedicated to the development, marketing, installation and support of turnkey hospital information systems. The division's current product line consists of the ALLEGRA[R] system.
- The Physicians' Services Division currently markets and supports the SIGNATURE product line to physician group clients.
- The SMS MedSeries4 Division, based in Salt Lake City (UT), was formed in 1994 with the acquisition of GTE Health Systems. This division markets the MedSeries product line to health care providers.
- The Federal Systems Division, formed in 1988, markets SMS' products and services to hospitals operated by the federal government.
- Health Data Exchange (HDX), formed in 1993 and based in Malvern (PA), is a wholly owned subsidiary providing systems for electronic interchange of health care data among providers, payors and others involved in the health care industry.
- SMS Europe markets SMS products and services outside North America.
- Delta Health Systems, based in Altoona (PA), is a partnership between SMS and Delta Computer Systems, Inc. that provides clinical and financial information systems for home health care applications.

SMS currently has contracts with customers in 49 states, the District of Columbia and Puerto Rico. The company also has hospital contracts in Canada, the U.K., Ireland, The Netherlands, France, Germany, Italy, Portugal and Spain.

U.S. branch offices are located in the metropolitan areas of Ann Arbor (MI); Atlanta (GA); Boston (MA); Charlotte (NC); Chicago (IL); Cleveland and Columbus (OH); Dallas (TX); Denver (CO); Dover (NH); Indianapolis (IN); Kansas City (KS); Los Angeles, Oakland, San Francisco and Santa Barbara (CA); Miami (FL); Nashville (TN); New Orleans (LA); New York (NY); Philadelphia and Pittsburgh (PA); Salt Lake City (UT), Seattle (WA); Somerset (NJ); St. Louis (MO); Tucson (AZ), Washington,

© INPUT 1994. Reproduction prohibited.

D.C.; and Wilmington (DE). The company also has an office in San Juan (PR).

Four educational and training centers are located near Philadelphia, Chicago, Fort Lauderdale and San Francisco.

SMS Europe, headquartered in England, has operating offices in Belgium, the Czech Republic, France, Germany, Ireland, Italy, Spain, the Netherlands and the U.K.

Company Strategy

SMS is positioning itself to be the leading provider of regionally based integrated health care network (IHNs) delivery systems.

The company is focusing on providing enabling technology for managed care within and across health care enterprises.

- SMS' combined strengths in health care information systems solutions, network and database integration, outsourcing, network services and strategic consulting services help provide not only the ability to implement integrated health care delivery systems but also to manage them on an outsourcing basis.

- A significant strategic direction of the company is also to establish world class alliances to better serve customer needs. On particular project-based collaboration, alliances can be with companies that SMS might compete with on other projects. One example of this is the Chicago CHIN project, which involves multiple partners like AT&T, which can also be a competitor in other situations.

- The company's strength in working with distributed processing solutions—which can involve a combination of remote processing at its Information Systems Center combined with client-based processing—has helped the company develop interface tools to provide multivendor product integration as well as integrating multiple database structures for developing computer-based electronic medical records.

Financials

SMS' 1993 revenue reached $501.3 million, a 7% increase over 1992 revenue of $469.6 million. Net income reached $31.0 million, a 9% increase over net income of $28.4 million for 1992. A five-year financial summary is shown on the following page.

SMS management attributes 1993 results to the following:

- Revenue growth was due to higher levels of professional services, support and installations and system processing fees. Hardware sales did not change from 1992 levels.

- After tax income and earnings per share grew by a smaller percentage due to the Clinton Administration's recent tax increase.

- The lackluster economy in Europe and a strengthening of the dollar slowed the growth of revenues and profits from European operations. (Profits in 1993 from European operations would have been 20% higher than reported had the average currency translation rates for 1993 been equal to those of 1992.) Significant sales were made during the year, including adding 20 new hospital clients in Germany.

© INPUT 1994. Reproduction prohibited.

Shared Medical Systems Corporation
Five-Year Financial Summary
($ Millions, except per share data)

Item	Fiscal Year				
	1993	1992	1991	1990	1989
Revenue	$501.3	$469.6	$438.7	$403.1	$390.0
• Percent change from previous year	7%	7%	9%	3%	3%
Income before taxes	$51.7	$45.0	$39.5	$33.8	$27.0
• Percent change from previous year	15%	14%	17%	25%	(40%)
Net income	$31.0	$28.4	$25.3	$22.7	$23.1
• Percent change from previous year	9%	12%	12%	(2%)	(21%(
Earnings per share	$1.35	$1.24	$1.11	$1.01	$1.01
• Percent change from previous year	9%	12%	10%	--	(19%)

Revenue Analysis by Product/Service:

INPUT estimates SMS' 1993 revenue was derived approximately as follows:

Processing services 45%
Network services 10%
Systems operations 20%
Software products.....10%
Professional services 10%
Systems integration..... 5%
100%

A three-year summary of source of revenue by product/service as reported by SMS follows:

Shared Medical Systems Corporation
Three-Year Source of Revenue Summary
($ Millions)

Product/Service	Fiscal Year					
	1993		1992		1991	
	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Service and system fees	$452.8	90%	$421.6	90%	$390.6	89%
Hardware sales	48.5	10%	48.0	10%	48.1	11%
Total	$501.3	100%	$469.6	100%	$438.7	100%

© INPUT 1994 Reproduction prohibited.

Interim Results

Revenue for the nine months ending September 30, 1994 reached $396.6 million, a 9% increase over $365.1 million for the same period in 1993. Net income rose 15%, from $22.6 million to $26.0 million.

Market Financials

Virtually 100% of SMS' 1993 revenue was derived from the health services industry.

SMS' primary markets are acute-care (short-stay) hospitals, generally with 100 or more beds, multi-entity health care corporations, physicians groups and other health care provides.

SMS' products are offered to hospitals of all types (urban, teaching, suburban, rural, specialty), proprietary hospital companies and non-for-profit multihospital groups. The company's products are also offered to health care organizations such as clinics, physician group practices, medical schools, public health departments and home health care organizations.

Geographic Markets

Approximately 88% of SMS' 1993 revenue was derived from North America and 12% from Europe.

A three-year summary of geographic sources of revenue follows:

Shared Medical Systems Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1993		1992		1991	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
North America (a)	$439.3	88%	$404.0	86%	$385.7	88%
Europe (b)	62.0	12%	65.6	14%	53.0	12%
Total	$501.3	100%	$469.6	100%	$438.7	100%

(a) North American operations recorded operating profit of $47.2 million, $40.3 million and $36.4 million for 1993, 1992 and 1991, respectively.

(b) European operations recorded operating profit of $5.8 million, $5.8 million and $4.1 million in 1993, 1992 and 1991, respectively.

Acquisitions

In October 1994, SMS acquired GTE Health Systems (GTEHS) of Salt Lake City (UT) from GTE Corporation.

- GTEHS, with approximately 220 employees and offices in Salt Lake City, Philadelphia and Atlanta, provides general financial, patient accounting and clinical management applications for IBM's AS/400 midrange computer platforms to health care providers. GTEHS has more than 300 clients nationwide.
- GTEHS now operates as the SMS MedSeries Division of SMS.

© INPUT 1994. Reproduction prohibited.

Employees

As of December 31, 1993, SMS had 4,015 full-time employees.

As of December 1994, SMS had 3,988 employees worldwide.

Key Products and Services

SMS currently serves more than 1,500 hospitals and physician group practices.

SMS operates the largest health care network in the U.S., which consists of more than 500,000 miles of communications lines, containing more than 3,000 communication devices and connection to more than 70,000 customer terminals and printers.

- SMS provides processing services to its clients from its Information Systems Center, which operates 24 hours a day, 365 days a year, serving users at more than 600 sites with more than 51,000 terminals on a daily basis.

- SMS offers open system solutions that helps customers interconnect the disparate operational systems, products and technologies of new network members without major changes to any of the individual systems. The SMS interface engine acts as a central communications hub that interfaces any system or application to another using any protocol or data format, including VMS, UNIX, NT, MVS and DOS-based systems.

- SMS provides more than 100 applications to its clients for financial, administrative, clinical and decision support applications. A summary of applications is shown in the exhibit.

SMS INVISION® is SMS' IBM-based software product, which includes clinical, financial and decision support capabilities. The product is available either for purchase for in-house use, or as a remote processing service. There are currently approximately 500 SMS INVISION system users.

CareCenter™, introduced in 1993, is SMS' new family of clinical information applications built on client/server technology using Microsoft Windows graphical presentation and is designed to make patient information readily available to physicians, nurses and other caregivers at any point along the continuum of care.

- Using CareCenter, physicians and nurses can review and enter vital signs, assessments and other patient information from a hospital site, clinic or physician's office and that information is immediately accessible to other CareCenter users throughout the health care enterprise.

- CareCenter was designed to surround SMS INVISION applications with a common front-end.

- Clinical applications available with CareCenter include care protocols, an interface to physiologic monitors, quality management, utilization management and medical records management. In addition, CareCenter provides access to other PC-based applications such as electronic mail and outside reference data bases, including medical libraries.

© INPUT 1994. Reproduction prohibited.

Exhibit

SMS Applications

APPLICATION AREA	APPLICATION AREA
Financial Management - Inpatient Billing - Advanced Outpatient - Physicians Billing - General Ledger and Statistics - Risk Management - Planning - Marketing Support - Payroll - Time and Attendance - Personnel - Human Resources - On-line Account Management - On-line Cost Accounting Management - On-line Materials Management - Inventory Control - Accounts Payable - Accounts Receivable - Property Accounting Management - Ambulatory Information System - Financial Patient Index - Master Patient Index **Administration** - Administration, Planning and Statistics - Census - Comparative Statistics - Discharge Planning - Infection Control - Medical Records - Professional Services - Quality Assurance - Risk Management - Tumor Registry - Utilization Review - DRG Management - Drug Utilization Review - Marketing - Mortality Rate Analysis - Contract Management **Decision Support** - Trend Monitor - Cost Accounting Manager - Performance Manager - Flexible Budget Monitor - INFOSTATION	**Clinical Management** - Admissions - Care Planning - Chart Location and Delinquency - Clinic Scheduling - Inpatient Registration - Laboratory: Blood Bank, Chemistry, Anatomic Pathology, Microbiology - Order Processing - Results Reporting - Outpatient Registration - Nurse Staffing - Patient Care Plans - Patient Identification - Resource Scheduling - Pharmacy - Radiology - Reregistration - Dietary - Remote Physician Access **Physician's Systems** - Architecture - Decision Control - Patient Management - Guarantor/Patient Billing - Insurance Processing - Accounts Receivable - Physician Production Analysis - Advanced Collection Workstation - Medical Records Chart Tracking - Clinical Patient Profiles - Ad Hoc Reporting - Appointment Scheduling **Other** - HARMONY (LAN product) - Development Office System - Computer-Aided Instruction - Professional Staff Credentialing - OPENLink

© INPUT 1994. Reproduction prohibited.

UNITY® is a distributed system with clinical applications processed on in-hospital DEC or IBM computers and financial applications processed remotely at the SMS Information Systems Center.

SMS' current DEC VAX-based Laboratory Management System, includes anatomic pathology, microbiology and blood bank applications. New features include enhancements to optical disk archiving, VAX to FAX reporting, advanced reflex testing and a handheld phlebotomy bar code unit for bedside point-of-care support. The system can serve any single hospital or multi-entity environment and can be delivered as part of an integrated hospital system or on a standalone basis.

ALLEGRA[R] is an in-house integrated health care information system targeted primarily to community hospitals with 100 to 400 beds.

- The system supports clinical, financial, administrative and decision support applications.
- ALLEGRA 2000, released in February 1994, is a new version of ALLEGRA that offers features such as EDI services for eligibility and referral (through Healthcare Data Exchange); CareRecord™, a lifetime patient data repository; document imaging; and an executive information system.
- ALLEGRA is now available on the UNIX operating systems for a range of platforms, including DEC, HP and IBM RS/6000 systems, as well as DEC VAX VMS environments.
- There are currently 60 ALLEGRA clients.

Through the MedSeries4 Division, SMS provides the following applications for IBM AS/400 computers:

- *General Financials*—General ledger, accounts payable, payroll/personnel, asset and maintenance tracking
- *Patient Accounting*—ADT, reimbursement management, case mix, medical information record access
- *Clinical Management*—order communications, physician access, clinical results

SMS offers its SIGNATURE[R] product line—a set of physician-group applications for financial, clinical and administrative functions—to medical groups of various sizes.

- SIGNATURE modules include architecture, decision control, patient management, guarantor/patient billing, insurance processing, accounts receivable management and physician production analysis.
- Optional applications include advanced collection workstation, medical records chart tracking, clinical patient profiles, ad hoc reporting and appointment scheduling.
- SIGNATURE is available as an in-house system or as a remote computing option. All configurations operate using IBM and compatible computers under MVS.
- There are currently more than 120 SIGNATURE clients.

SMS' Healthcare Data Exchange (HDX) subsidiary facilitates the electronic communication of industry standardized

© INPUT 1994. Reproduction prohibited.

information among all parties involved in the health care industry.

- For example, HDX electronically links a 250,000 member community health care network in New England—comprised of hospitals, physicians groups, multispecialty clinics, laboratories, health insurers, government agencies and financial institutions—for eligibility verification, claims and remittance transmissions.

Through Delta Health Systems, SMS provides clinical and financial information systems for home health care providers.

- Clinical-Link™ uses a laptop computer in the home where care is administered to streamline field documentation. At the end of the day, each laptop computer automatically calls the file server via a phone line and transmits the clinician's activities. This transmission provides the file server with a copy of the updated chart for each patient.

- Other products/applications offered through Delta include:
 - Billing/statistical accounts receivable
 - In-House Plus
 - HCFA 485, 486, 487 Plan of Treatment
 - Individualized care plans
 - Electronic billing
 - Electronic plan of treatment
 - Medication reporting
 - Payroll
 - Ad-hoc report writer
 - General ledger
 - Word processing
 - Scheduling
 - Electronic charting
 - Hospice benefits
 - Admission/referral
 - Accounts payable
- Delta systems run on IBM PCs and a variety of PC-based UNIX systems, a RISC platform and can also run on a Novell network.

Professional services provided to hospitals include education, custom programming, proprietary network design, system installation and consulting.

Marketing and Sales

Domestically, SMS markets its products and provides installation services and ongoing technical and educational support with a field staff working out of branch offices.

In Europe, SMS markets, installs and supports its products through local offices in seven countries.

Alliances

In September 1994, SMS and Hewlett-Packard (HP) announced a business alliance to jointly provide critical care solutions for health care networks, enterprises and individual hospitals. SMS will market, sell, install and support components of HP CareVue's critical care applications modified to run on SMS' CareCenter.

© INPUT 1994. Reproduction prohibited.

SMS has named Multum Information Services, Inc. an Allied Partner for the marketing of Multum's MediSource patient-specific drug dosing, interaction and side effect information service.

SMS has named Foundation Systems, Inc. (FSI) an Allied Partner. FSI will work cooperatively with SMS to provide its Pharmacy Management System to SMS customer hospitals operating an outpatient retail pharmacy.

SMS has an agreement with DEC to distribute ALLEGRA on DEC's OSF/1 UNIX-based operating system as well as on the DEC VAX Open VMS operating system.

SMS and IHS/SoftMed have a marketing alliance whereby SMS is marketing IHS/SoftMed's chart management and abstracting solutions to SMS' INVISION and UNITY customers and prospects.

SMS and Health Systems Design Corporation (HSD) have a business alliance to jointly provide managed care solutions for health care networks, physician group practices and provider-based managed care organizations. SMS is marketing and supporting HSD's UNIX-based Diamond managed care information system. Diamond will be fully integrated with SMS' software products.

SMS has named The CBORD Group of Ithaca (NY) an Allied Partner for the marketing of institutional food and nutrition software applications and cashless point-of-service system to the health care industry. As a Allied Partner, The CBORD Group is working with SMS to provide food service management systems to SMS customers.

SMS and Critikon, Inc. have an Allied Partner agreement whereby SMS INVISION customers can use Critikon's CARESTATION 2000 Workstations.

Competitors

Major competitors of SMS include the following:

- Processing competitors include First Data Corporation and various regional firms.
- Competition from vendors providing in-house systems comes from HBO & Company and Cerner.
- Physicians' services competitors include CyCare and IDX.

© INPUT 1994. Reproduction prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Graham King, President
Public Corporation, NASDAQ
Total Employees: 4,093 (12/91)
Total Revenue, Fiscal Year End
12/31/91: $438,705,000

The Company

Shared Medical Systems Corporation (SMS) was formed in 1969 to provide information services to the health care industry. SMS became a publicly held corporation in June 1976.

SMS is currently the nation's acknowledged leader in information services for the health care industry.

- The company's products and services are provided to hospitals, clinics, and physician groups for financial, clinical, administrative, and decision support applications.

- SMS currently provides remote computing, network, and distributed processing services; client site systems operations services; applications software products; turnkey systems; and various professional services, including proprietary network design, custom programming, systems installation, and education.

According to SMS, the number of U.S. acute care hospital beds has declined slightly in recent years, but SMS states it has experienced growing demand for health care information systems.

- Trends contributing to the need for more sophisticated health care systems include the increase in information needed for government and insurers, new health care services, the needs of HMOs and PPOs, and health care cost containment pressures.

During 1991 and early 1992, SMS made a reassessment of its markets and sold certain portions of its business that it anticipated would not be growth areas for the company in the 1990s. These divested businesses represented annual revenues of less than $20 million.

- In February 1992, SMS sold its billing and accounts receivable management services for group physicians to Medaphis Corporation of Atlanta (GA) for approximately $6 million. SMS

Copyright 1992 by INPUT. Reproduction Prohibited.

retained its SIGNATURE[R] system offered through the Physicians' Services Division.

- SMS sold its Canadian subsidiary (SMSC), which supplied software systems for Canadian hospitals, to IST-Healthcare, Inc., a Canadian company. The agreement includes certain joint marketing arrangements between SMS and IST.

Revenue for 1991 was $438.7 million, a 9% increase over 1990 revenueof $403.1 million. Net income rose 12%, from $22.7 million in 1990 to $25.3 million in 1991. A five-year financial summary follows:

SHARED MEDICAL SYSTEMS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	1991	1990	1989	1988	1987
Revenue	$438.7	$403.1	$390.0	$378.7	$390.7
· Percent increase (decrease) from previous year	9%	3%	3%	(3%)	4%
Income before taxes	$39.5	$33.8	$27.0	$45.0	$75.5
· Percent increase (decrease) from previous year	17%	25%	(40%)	(40%)	37%
Net income	$25.3	$22.7	$23.1	$29.4	$45.3
· Percent increase (decrease) from previous year	12%	(2%)	(21%)	(35%)	42%
Earnings per share	$1.11	$1.01	$1.01	$1.25	$1.80
· Percent increase (decrease) from previous year	10%	--	(19%)	(31%)	43%

During 1991, SMS achieved management's goal of growing earnings at double-digit rates and record revenues.

- European division sales grew 39%, from $38.0 million in 1990 to $53.0 million in 1991.

- The U.S. business units continued to grow. During 1991, SMS installed over 200 financial, clinical, departmental, decision, support, physicians group practice, and public health systems. Over 100 clients purchased SMS clinical systems and over 60 clients purchased departmental systems.

Copyright 1992 by INPUT. Reproduction Prohibited.

Research and development expenditures were approximately $33.6 million (8% of revenue) in 1991, $31.9 million (8% of revenue) in 1990, and $34.4 million (9% of revenue) in 1989.

Revenue for the three months ending March 31, 1992 reached $112.5 million, compared to $102.0 million for the same period in 1991. Net income was $6.8 million, compared to $6.1 million for the same period a year ago.

SMS is currently organized into the following divisions:

- The Hospital Systems Division, SMS' largest business unit, provides network and distributed processing services, applications software, and associated hardware to domestic, nonfederal hospitals.
- The Laboratory Products Division, formed in early 1988, is dedicated specifically to the development, marketing, delivery, and support of hospital clinical laboratory information systems.
- The Turnkey Systems Division, formed in late 1987, is dedicated exclusively to the development, marketing, installation, and support of DEC-based turnkey hospital information systems. The division's current product line consists of the ALLEGRA[R] system.
- The Physicians' Services Division currently markets and supports the SIGNATURE product line to physician group clients.
- The Federal Systems Division, formed in 1988, markets SMS' products and services to hospitals operated by the federal government.
- SMS Europe markets SMS products and services outside North America.

Major competitors of SMS include the following:

- Processing competitors include Systems Associates, Inc. (First Data Resources/American Express) and various regional firms.
- Competition from vendors providing in-house systems comes from HBO & Company and IBAX.
- Physicians' services competitors include Cycare and IDX.

Copyright 1992 by INPUT. Reproduction Prohibited.

Key Products and Services

Although the company now downplays the "shared" portion of its name, INPUT estimates that approximately 50% of SMS' 1991 revenue was derived from remote processing and systems operations services, with the remaining half split roughly between software product licenses and turnkey systems. A small amount, about 5%, comes from professional services.

- The company's primary market is acute-care hospitals -- generally with 100 or more beds -- and physician groups.
- SMS currently serves more than 1,300 hospitals and physician group practices.
- There are over 1,000 mainframes and minicomputers running SMS software installed at SMS client locations.

SMS is positioning itself to lead the health care systems industry in three key technologies for the 1990s.

- The company is using LAN technologies to integrate both existing departmental systems and newly installed systems.
- New development using image processing and optical disc technology is being explored, especially in departments such as radiology, where the use of information systems is changing.
- SMS is committed to relational data base technology as the key to increasing the accessibility of information.

SMS currently provides remote computing and distributed processing to its hospital clients via the Information Systems Center.

- The Center processes data for more than 800 hospital and physician group clients using IBM 3090 computers. There are currently more than 30,000 terminals attached to the network that connect clients with the Information Systems Center.

SMS provides over 100 applications to its hospital, clinic, and physician group clients for financial, administrative, and clinical management. A summary of applications is shown in the following exhibit.

Copyright 1992 by INPUT. Reproduction Prohibited.

EXHIBIT

SMS APPLICATIONS

APPLICATION AREA	APPLICATION AREA
Financial Management · Inpatient Billing · Advanced Outpatient · Physicians Billing · General Ledger and Statistics · Risk Management · Planning · Marketing Support · Payroll · Time and Attendance · Personnel · Human Resources · On-line Account Management · On-line Cost Accounting Management · On-line Materials Management · Inventory Control · Accounts Payable · Accounts Receivable · Property Accounting Management · Ambulatory Information System · Financial Patient Index · Master Patient Index **Administration** · Administration, Planning, and Statistics · Census · Comparative Statistics · Discharge Planning · Infection Control · Medical Records · Professional Services · Quality Assurance · Risk Management · Tumor Registry · Utilization Review · DRG Management · Drug Utilization Review · Marketing · Mortality Rate Analysis **Decision Support** · Trend Monitor · Cost Accounting Manager · Performance Manager · Flexible Budget Monitor · INFOSTATION	**Clinical Management** · Admissions · Care Planning · Chart Location and Delinquency · Clinic Scheduling · Inpatient Registration · Laboratory: Blood Bank, Chemistry, Anatomic Pathology, Microbiology · Order Processing · Results Reporting · Outpatient Registration · Nurse Staffing · Patient Care Plans · Patient Identification · Resource Scheduling · Pharmacy · Radiology · Reregistration · Dietary · Remote Physician Access **Physicians' Systems** · Architecture · Decision Control · Patient Management · Guarantor/Patient Billing · Insurance Processing · Accounts Receivable · Physician Production Analysis · Advanced Collection Workstation · Medical Records Chart Tracking · Clinical Patient Profiles · Ad Hoc Reporting · Appointment Scheduling Other · HARMONY (LAN product) · Development Office System · Computer-Aided Instruction · Professional Staff Credentialing

Copyright 1992 by INPUT. Reproduction Prohibited.

- INVISION®, introduced in September 1989, is SMS's IBM-based software product, which includes clinical, financial, and decision support capabilities. The product is available either for purchase for in-house use, or as a remote processing service.

 - All SMS INDEPENDENCE™ remote processing clients were migrated to INVISION by May 1991, and over half of the INDEPENDENCE in-house customer base is expected to install INVISION this year. There are currently about 270 INVISION system users.

- ALLEGRA® is an integrated DEC VAX-based health care information system targeted primarily to community hospitals with 100 to 400 beds. The system supports clinical, financial, administrative, and decision support applications. There are currently 60 ALLEGRA clients.

- UNITY℠ is a distributed system with clinical applications processed on in-hospital DEC or IBM computers, and financial applications processed remotely at the SMS Information Systems Center.

- SMS' current DEC VAX-based Laboratory System, marketed and supported by the Laboratory Products Division, includes anatomic pathology and blood bank applications, and a MicroVAX-based, on-line instrument interface capability. The system can serve any single hospital or multi-entity environment and can be delivered as part of an integrated hospital system or on a standalone basis.

- Professional services provided to hospitals include education, custom programming, proprietary network design, system installation, and consulting.

New/enhanced applications include the following:

- Radiology Management System Version 21, a new DEC-based software product that includes a number of features designed for use by physicians, was announced in October 1990. "VAX to FAX" and voice results reporting capabilities allow physicians to receive results directly without clerical support via either fax to their offices or voice synthesizer-based telephone access.

- In March 1991, SMS introduced two workstation-based products as part of the INVISION product line:

Copyright 1992 by INPUT. Reproduction Prohibited.

- The Receivables Management Workstation supports receivables management through on-line collector worklists and first- and third-party collection letters.

- The Physician Workstation, designed for use by doctors and nurses, provides a graphical user interface to display lifetime clinical results and observations.

SMS offers its SIGNATURE[R] product line, a set of physician-group applications for financial, clinical, and administrative functions to medical groups of various sizes.

- SIGNATURE modules include architecture, decision control, patient management, guarantor/patient billing, insurance processing, accounts receivable management, and physician production analysis.

- Optional applications include advanced collection workstation, medical records chart tracking, clinical patient profiles, ad hoc Reporting, and appointment scheduling.

- SIGNATURE is available as an in-house system or as a remote computing option. All configurations operate using IBM and compatible computers under MVS.

- There are currently over 120 SIGNATURE clients.

Industry Markets

Virtually 100% of SMS' 1991 revenue was derived from the medical industry. Acute-care hospitals accounted for the majority, with the remainder from physician group practices and clinics.

SMS currently has one federally funded hospital client -- the Philadelphia Veterans' Hospital.

Geographic Markets

Approximately 88% of SMS' 1991 revenue was derived from North America and 12% from Europe. A three-year geographic source of revenue summary follows:

Copyright 1992 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1991		1990		1989	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
North America	$385.7	88%	$365.1	91%	$357.6	92%
Europe	53.0	12%	38.0	9%	32.4	8%
TOTAL	**$438.7**	**100%**	**$403.1**	**100%**	**$390.0**	**100%**

SMS currently has contracts with hospitals in 48 states, the District of Columbia, and Puerto Rico. The company also has hospital contracts in Canada, the U.K., Ireland, The Netherlands, Germany, and Spain.

U.S. branch offices are located in Ann Arbor (MI); Atlanta (GA); Boston (MA); Charlotte (NC); Chicago (IL); Cleveland and Columbus (OH); Dallas (TX); Denver (CO); Indianapolis (IN); Kansas City (KS); Los Angeles, Oakland, San Francisco, and Santa Barbara (CA); Miami (FL); Nashville (TN); New Orleans (LA); New York (NY); Philadelphia and Pittsburgh (PA); Seattle (WA); Somerset (NJ); St. Louis (MO); and Washington, D.C. The company also has an office in San Juan (PR).

SMS Europe, headquartered in England, has operating offices in Germany, Ireland, Spain, the Netherlands, and the U.K.

Computer Hardware

SMS has the following computers installed at its data center in Malvern (PA):

- 1 IBM 3090-600E
- 1 IBM 3090-600J
- 1 IBM 3090-600S
- 1 IBM 3090-380J

Copyright 1992 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Graham King, President
Public Corporation, OTC
Total Employees: 3,995 (12/90)
Total Revenue, Fiscal Year End
12/31/90: $403,127,000

The Company

Shared Medical Systems Corporation (SMS) was formed in 1969 to provide information services to the health care industry. SMS became a publicly held corporation in June 1976.

SMS is currently the nation's acknowledged leader in information services for the health care industry.

- The company's products and services are provided to hospitals, clinics, and physician groups for financial, clinical, administrative, and decision support applications.

- SMS currently provides remote computing, network, and distributed processing services; client site systems operations services; application software products; turnkey systems; and various professional services, including proprietary network design, custom programming, systems installation, and education.

According to SMS, the number of U.S. acute care hospital beds has declined slightly in recent years, but SMS states it has experienced growing demand for health care information systems.

- Trends contributing to the need for more sophisticated health care systems include the increase in information needed for government and insurers, new health care services, the needs of HMOs and PPOs, and health care cost containment pressures.

Revenue for 1990 was $403.1 million, a 3% increase over 1989 revenue of $390 million. Net income declined 2%, from $23.1 million in 1989 to $22.7 million in 1990.

A five-year financial summary follows:

Copyright 1991 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	1990	1989	1988	1987	1986
Revenue	$403.1	$390.0	$378.7	$390.7	$374.9
· Percent increase (decrease) from previous year	3%	3%	(3%)	4%	20%
Income before taxes	$33.8	$27.0	$45.0	$75.5	$55.3
· Percent increase (decrease) from previous year	25%	(40%)	(40%)	37%	(26%)
Net income	$22.7	$23.1	$29.4	$45.3	$32.0
· Percent increase (decrease) from previous year	(2%)	(21%)	(35%)	42%	(23%)
Earnings per share	$1.01	$1.01	$1.25	$1.80	$1.26
· Percent increase (decrease) from previous year	(0%)	(19%)	(31%)	43%	(24%)

SMS management expressed optimism over the 1990 financial results:

- 1990 marked SMS's first year of revenues over $400 million.
- A two-year decline in earnings per share was halted in 1990.
- The stronger results were attributed primarily to stronger product and services sales and growth in European markets.

Research and development expenditures were approximately $31.9 million (8% of revenue) in 1990, $34.4 million (9% of revenue) in 1989, and $37.5 million (10% of revenue) in 1988.

Financial results for the first half of 1991 included revenues of $211.6 million and net income of $12.2 million. These results constitute a 8.9% increase in revenues and a 11.7% increase in net income over the first half of 1990.

SMS is currently organized into seven divisions as follows:

- The Hospital Systems Division, SMS' largest business unit, provides network and distributed processing services, application

Copyright 1991 by INPUT. Reproduction Prohibited.

software, and associated hardware to domestic, nonfederal hospitals.

- The Decision Support Division, formed in 1988, markets a family of integrated DEC-based decision support products and provides consulting services.
- The Laboratory Products Division, formed in early 1988, is dedicated specifically to the development, marketing, delivery, and support of hospital clinical laboratory information systems.
- The Turnkey Systems Division, formed in late 1987, is dedicated exclusively to the development, marketing, installation, and support of DEC-based turnkey hospital information systems. The division's current product line consists of the ALLEGRA™ system.
- The Physicians' Services Division provides processing, systems operations, turnkey systems, and practice management and consulting services to physician group clients.
- The Federal Systems Division, formed in 1988, markets SMS' products and services to hospitals operated by the federal government.
- SMS International N.V. markets SMS products and services outside North America.

Major competitors of SMS include the following:

- Processing competitors include Systems Associates, Inc. (First Data Resources/American Express) and various regional firms.
- Competition from vendors providing in-house systems comes from HBO & Company and IBAX.
- Physicians' services competitors include Cycare and IDX.

Key Products and Services

Although the company now downplays the "shared" portion of its name, INPUT estimates that approximately 50% of SMS' 1990 revenue was derived from remote processing and systems operations services, with the remaining half split roughly between software product licenses and turnkey systems. A small amount, 5% or less, comes from professional services.

- The company's primary market is acute-care hospitals -- generally with 100 or more beds -- and physician groups.

Copyright 1991 by INPUT. Reproduction Prohibited.

- SMS currently serves more than 1,200 hospitals and physician group practices.

- There are over 1,000 mainframes and minicomputers running SMS software installed at SMS client locations.

SMS is positioning itself to lead the health care systems industry in three key technologies for the 1990s.

- The company is using LAN technologies to integrate both existing departmental systems and newly installed systems.

- New development using image processing and optical disc technology is being explored, especially in departments such as radiology where the use of information systems is changing.

- SMS is committed to relational data base technology as the key to increasing the accessibility of information.

SMS currently provides remote computing, and distributed processing to its hospital clients via the Information Systems Center.

- The Center processes data for more than 800 hospital and physician group clients using IBM 3090 computers. There are currently more than 30,000 terminals attached to the network that connect clients with the Information Systems Center.

SMS provides over 100 applications to its hospital, clinic, and physician group clients for financial, administrative, and clinical management. A summary of applications is shown in the following exhibit.

Copyright 1991 by INPUT. Reproduction Prohibited.

EXHIBIT

SMS APPLICATIONS

APPLICATION AREA	APPLICATION AREA
Financial Management · Inpatient Billing · Advanced Outpatient · Physicians Billing · General Ledger and Statistics · Risk Management · Planning · Marketing Support · Payroll · Time and Attendance · Personnel · Human Resources · On-line Account Management · On-line Cost Accounting Management · On-line Materials Management · Inventory Control · Accounts Payable · Accounts Receivable · Property Accounting Management · Ambulatory Information System · Financial Patient Index · Master Patient Index **Administration** · Administration, Planning, and Statistics · Census · Comparative Statistics · Discharge Planning · Infection Control · Medical Records · Professional Services · Quality Assurance · Risk Management · Tumor Registry · Utilization Review · DRG Management · Drug Utilization Review · Marketing · Mortality Rate Analysis **Decision Support** · Trend Monitor · Cost Accounting Manager · Performance Manager · Flexible Budget Monitor · INFOSTATION	**Clinical Management** · Admissions · Care Planning · Chart Location and Delinquency · Clinic Scheduling · Inpatient Registration · Laboratory: Blood Bank, Chemistry, Anatomic Pathology, Microbiology · Order Processing · Results Reporting · Outpatient Registration · Nurse Staffing · Patient Care Plans · Patient Identification · Resource Scheduling · Pharmacy · Radiology · Reregistration · Dietary · Remote Physician Access **Physicians' Systems** · Architecture · Decision Control · Patient Management · Guarantor/Patient Billing · Insurance Processing · Accounts Receivable · Physician Production Analysis · Advanced Collection Workstation · Medical Records Chart Tracking · Clinical Patient Profiles · Ad Hoc Reporting · Appointment Scheduling **Other** · HARMONY (LAN product) · Development Office System · Computer-Aided Instruction · Professional Staff Credentialing

Copyright 1991 by INPUT. Reproduction Prohibited.

- INVISION®, introduced in September 1989, is SMS's IBM-based software product, which includes clinical, financial, and decision support capabilities. The product is available either for purchase for in-house use, or as a remote processing service.

 - All SMS INDEPENDENCE™ remote processing clients were migrated to INVISION by May, 1991, and over half of the INDEPENDENCE in-house customer base is expected to install INVISION this year. Two hundred hospitals currently use INVISION as an in-house product or as remote processing service.

- ALLEGRA® is an integrated DEC VAX-based health care information system targeted primarily to community hospitals with 100 to 400 beds. The system supports clinical, financial, administrative, and decision support applications. There are currently 50 ALLEGRA clients.

- UNITY℠ is a distributed system with clinical applications processed on in-hospital DEC or IBM computers, and financial applications processed remotely at the SMS Information Systems Center.

- SMS' current DEC VAX-based Laboratory System, marketed and supported by the Laboratory Products Division, includes anatomic pathology and blood bank applications, and a MicroVAX-based, on-line instrument interface capability. The system can serve any single hospital or multi-entity environment and can be delivered as part of an integrated hospital system or on a standalone basis.

- Professional services provided to hospitals include education, custom programming, proprietary network design, system installation, and consulting.

New/enhanced applications include the following:

- Radiology Management System Version 21, a new DEC-based software product which includes a number of features designed for use by physicians, was announced in October 1990. "VAX to FAX" and voice results reporting capabilities allow physicians to receive results directly without clerical support via either fax to their office or voice synthesizer-based telephone access.

- In March 1991, SMS introduced two workstation-based products as part of the INVISION product line:

Copyright 1991 by INPUT. Reproduction Prohibited.

- The Receivables Management Workstation supports receivables management through online collector worklists and first- and third-party collection letters.

- The Physician Workstation, designed for use by doctors and nurses, provides a graphical user interface to display lifetime clinical results and observations.

SMS has announced the following agreements:

- In January 1990, SMS signed an agreement with Executive Software to jointly market DISKEEPER/Plus, a disk defragmenter for the DEC VAX.

- In July 1990, SMS began offering to its clients a health care information service called the Automated Informational Marketing System (AIMS), from DataShare. AIMS is a pc-based system which distributes information on health care to the public via monitors mounted in lobbies, waiting rooms, or shopping malls. Each month, subscribers to the AIMS service receive new presentations on topics such as heart disease, cancer, and exercise.

- Since 1988, SMS and Atwork Corporation of Chapel Hill (NC) have jointly marketed three microcomputer-based nurse management information systems developed by Atwork.

 - The three systems include the Automated Nurse Staffing Office System, the Operating Room Scheduling Office System, and the Recruitment Manager.

SMS services over 400 medical practices representing over 10,000 physicians nationwide. The company offers its SIGNATURE[R] product line, a set of physician-group applications for financial, clinical, and administrative functions to medical groups of various sizes.

- SIGNATURE modules include architecture, decision control, patient management, guarantor/patient billing, insurance processing, accounts receivable management, and physician production analysis.

- Optional applications include advanced collection workstation, medical records chart tracking, clinical patient profiles, ad hoc Reporting, and appointment scheduling.

Copyright 1991 by INPUT. Reproduction Prohibited.

- SIGNATURE is available as an in-house or as a remote computing option. All configurations operate using IBM and compatible computers under MVS.
- There are currently over 120 SIGNATURE clients.

Industry Markets

Virtually 100% of SMS' 1990 revenue was derived from the medical industry. Acute-care hospitals accounted for the majority, with the remainder from physician group practices and clinics.

SMS currently has one federally-funded hospital client -- the Philadelphia Veterans' Hospital.

Geographic Markets

The majority of SMS' 1990 revenue was derived from the U.S. INPUT estimates less than 5% was derived from international locations.

SMS currently has contracts with hospitals in 47 states, the District of Columbia, and Puerto Rico. The company also has hospital contracts in Canada, the U.K., Ireland, The Netherlands, Germany, and Spain.

U.S. branch offices are located in Ann Arbor (MI); Atlanta (GA); Boston (MA); Charlotte (NC); Chicago (IL); Cleveland and Columbus (OH); Dallas (TX); Denver (CO); Indianapolis (IN); Kansas City (KS); Los Angeles, Oakland, San Francisco, and Santa Barbara (CA); Miami (FL); Nashville (TN); New Orleans (LA); New York (NY); Philadelphia and Pittsburgh (PA); Phoenix and Tucson (AZ); Seattle (WA); Somerset (NJ); St. Louis (MO); and Washington, D.C. The company also has an office in San Juan (PR).

International offices are located in Germany, Ireland, Spain, The Netherlands, and the U.K.

Computer Hardware

SMS has the following computers installed at its data center in Malvern (PA):

- 2 IBM 3090-600Es
- 1 IBM 3090-400E
- 1 IBM 3084-Q64 (made up of two IBM 3081s)

Copyright 1991 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Graham King, President
Public Corporation, OTC
Total Employees: 3,860
Total Revenue, Fiscal Year End 12/31/88: $378,738,000

The Company

Shared Medical Systems Corporation (SMS) was formed in 1969 to provide information services to the hospital industry. In June 1976, SMS became a publicly held corporation.

SMS is currently the nation's leading provider of information services to the health care industry.

- The company's products and services are provided to hospitals, clinics, and physician groups for financial, administrative, and clinical management applications.
- SMS currently provides remote computing, network, and distributed processing services; application software products; turnkey systems; and various professional services, including proprietary network design, custom programming, systems installation, education, and facilities management.

Revenue for 1988 was $378.7 million, a 3% decrease from 1987 revenue of $390.7 million. Net income declined 35%, from $45.3 million in 1987 to $29.4 million in 1988. A five-year financial summary follows:

Copyright 1989 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	1988	1987	1986	1985	1984
Revenue	$378,738	$390,730	$374,880	$312,207	$256,753
• Percent increase (decrease) from previous year	(3%)	4%	20%	22%	22%
Income before taxes	$44,952	$75,529	$55,300	$74,332	$62,637
• Percent increase (decrease) from previous year	(40%)	37%	(26%)	19%	22%
Net income	$29,398	$45,318	$31,968	$41,748	$33,756
• Percent increase (decrease) from previous year	(35%)	42%	(23%)	24%	24%
Earnings per share	$1.25	$1.80	$1.26	$1.66	$1.37
• Percent increase (decrease) from previous year	(31%)	43%	(24%)	21%	23%

SMS management attributes the company's slowed growth and net income declines to the following:

- 1988 revenue declines were attributed primarily to weaker sales and renewal activity during 1987 and a portion of 1988. In addition, a higher percentage of new contracts were fixed-price contracts (producing revenues on a monthly basis over several years), rather than perpetual license agreements (which generate large one-time license fees during the approximately twelve-month period following a sale).

- Expenses were approximately $333.8 million (88% of revenue) in 1988, compared to $315.2 million (81% of revenue) in 1987. The increase in expenses was attributed primarily to increased personnel costs and equipment-related costs to service the business. General and administrative expenses for 1988 include a charge of $2.5 million in anticipation of payment for the settlement of a class action suit filed against SMS and certain officers.

- The small revenue growth (4%) in 1987 was attributed to selling-related problems.

Copyright 1989 by INPUT. Reproduction Prohibited.

- In 1986, income before taxes and net income were adversely affected by the equity in losses and write-down of the company's investment in SMS International N.V. (SMSI) and the related shutdown expenses of SMSI's Japanese subsidiary.

 - SMSI, which operated as a 45%-owned affiliate of SMS during 1985, was established by SMS in 1981 to provide services--directly and through subsidiaries, joint ventures, and license arrangements--to health care organizations outside North America. Effective June 30, 1986, SMS acquired 100% ownership of SMSI.

 - The activities described above resulted in additional expenses during 1986 of approximately $30.2 million, reducing overall earnings by approximately $20 million.

Research and development expenditures were approximately $37.5 million (10% of revenue) in 1988, $37.9 million (10% of revenue) in 1987, and $34.4 million (9% of revenue) in 1986. During 1988, 1987, and 1986 the company also capitalized approximately $13.5 million, $8.7 million, and $3.1 million, respectively, for certain software development costs.

SMS is currently organized into seven divisions and two subsidiaries as follows:

- The Hospital Systems Division, SMS' largest business unit, provides network and distributed processing services, application software, and associated hardware to domestic, nonfederal hospitals.

- The Decision Support Division, formed in 1988, markets a family of integrated DEC-based decision support products and provides consulting services.

- The Laboratory Products Division, formed in early 1988, is dedicated specifically to the development, marketing, delivery, and support of hospital clinical laboratory information systems.

- The Radiology Systems Division, formed in 1988, provides DEC-based systems to the hospital radiology information systems market.

- The Turnkey Systems Division, formed in late 1987, is dedicated exclusively to the development, marketing, installation, and support of DEC-based turnkey hospital information systems. The division's current product line consists of the ALLEGRA™ system.

Copyright 1989 by INPUT. Reproduction Prohibited.

- The Physicians' Services Division provides processing, facilities management, turnkey systems, and practice management and consulting services to physician group clients.
- The Federal Systems Division, formed in 1988, markets SMS' products and services to hospitals operated by the federal government.
- SMS International N.V. markets SMS products and services outside North America.
- SMS Canada provides SMS products and services in Canada.

Major competitors of SMS include the following:

- Processing competitors include Systems Associates, Inc. (First Data Resources/American Express) and various regional firms.
- Competition from vendors providing in-house systems comes from IBM, HBO & Company, and Baxter Healthcare Corporation.
- Physicians' services competitors include Cycare and IDX.

Key Products and Services

INPUT estimates approximately 70% of SMS' 1988 revenue was derived from remote and facilities management processing services, 25% from software and hardware leases from in-house/distributed processing and turnkey systems, and the remaining 5% from professional services.

SMS' products and services are provided to hospitals, clinics, and physician groups.

- The company's primary market is acute-care hospitals, generally with 100 or more beds, and physician groups.
- SMS currently serves more than 1,200 hospitals and physician group practices.
- There are over 1,000 mainframes and minicomputers running SMS software installed at SMS client locations.

SMS provides over 100 applications to its hospital, clinic, and physician group clients for financial, administrative, and clinical management. A summary of applications provided by SMS is shown in the exhibit.

Copyright 1989 by INPUT. Reproduction Prohibited.

EXHIBIT

SMS APPLICATIONS

APPLICATION AREA	APPLICATION AREA
Financial Management • Inpatient Billing • Advanced Outpatient • Physicians Billing • General Ledger and Statistics • Risk Management • Planning • Marketing Support • Payroll • Time and Attendance • Personnel • Human Resources • On-line Account Management • On-line Cost Accounting Management • On-line Materials Management • Inventory Control • Accounts Payable • Accounts Receivable • Property Accounting Management • Ambulatory Information System • Financial Patient Index • Master Patient Index **Administration** • Administration, Planning, and Statistics • Census • Comparative Statistics • Discharge Planning • Infection Control • Medical Records • Professional Services • Quality Assurance • Risk Management • Tumor Registry • Utilization Review • DRG Management • Drug Utilization Review • Marketing • Mortality Rate Analysis **Decision Support** • Trend Monitor • Cost Accounting Manager • Performance Manager • Flexible Budget Monitor • INFOSTATION	**Clinical Management** • Admissions • Care Planning • Chart Location and Delinquency • Clinic Scheduling • Inpatient Registration • Laboratory: Blood Bank, Chemistry, Anatomic Pathology, Microbiology • Order Processing • Results Reporting • Outpatient Registration • Nurse Staffing • Patient Care Plans • Patient Identification • Resource Scheduling • Pharmacy • Radiology • Reregistration • Dietary • Remote Physician Access **Physicians' Systems** • Architecture • Decision Control • Patient Management • Guarantor/Patient Billing • Insurance Processing • Accounts Receivable • Physician Production Analysis • Advanced Collection Workstation • Medical Records Chart Tracking • Clinical Patient Profiles • Ad Hoc Reporting • Appointment Scheduling **Other** • HARMONY • Development Office System • Computer-Aided Instruction • Professional Staff Credentialing

Copyright 1989 by INPUT. Reproduction Prohibited.

New/enhanced applications introduced during 1988 include the following:

- The Decision Support Division released SMS' Decision Support System (DSS), a family of integrated DEC-based software applications, data bases, and consulting services for health care executives and managers.

 - DSS integrates clinical and financial information drawn from SMS applications, other hospital systems, and external data bases.

 - DSS applications address revenue management, costs, utilization, quality of care, and operational activities--such as HMO/PPO contracting, productivity analysis, and monitoring physician treatment profiles. DSS products include capabilities for forecasting and simulation, pricing analysis, and product line management and planning.

- A new version of SMS' Nursing application automates and integrates care plan and patient classification activities.

- During 1988, SMS began hospital-based tests of various bedside technologies, including stationary and handheld devices, in order to evaluate their effectiveness as part of nursing applications.

- The latest version of SMS' Radiology Management System, when integrated with a SMS hospital information system, supports patient scheduling, registration, tracking, results reporting, film tracking, and equipment maintenance scheduling. The system uses barcode technology to access films and reports. An electronic voice synthesizer facilitates remote inquiry into the results reporting system. Imaging capabilities are under development.

- SMS' Laboratory System now provides applications dedicated to chemistry, microbiology, anatomic pathology, and blood bank activities. SMS is pursuing a new segment of the clinical marketplace--multi-entity labs. During 1988, SMS' new Laboratory System was installed at a central lab that serves five affiliated hospitals.

- A new version of the SMS Pharmacy System provides inpatient and outpatient support of hospital pharmacy functions, including full medication and IV support of outpatients, expanded inventory control capabilities, and an enhanced clinical inquiry capability.

Copyright 1989 by INPUT. Reproduction Prohibited.

SMS currently provides remote computing, distributed processing, and in-house systems to its hospital clients.

- The Information Systems Center processes data for more than 800 hospital and physician group clients using IBM 3090 computers. There are currently more than 30,000 terminals attached to the network that connect clients with the Information Systems Center.

- INDEPENDENCE ™, an IBM-based financial and clinical management system targeted to large hospitals, is available as a remote computing service and as an in-house system for IBM 43XX and 30XX computers.

 - INDEPENDENCE Inhouse Computing Option (ICO) is targeted to large hospitals that require an in-house system.

 - SMS' INDEPENDENCE Remote Computing Option (RCO) allows hospitals to run their financial and clinical applications at SMS' Information Systems Center on dedicated computers.

 - Over 100 clients have INDEPENDENCE installed as an in-house system, and approximately 45 hospitals are using the Remote Computing Option.

- ALLEGRA® is an integrated DEC VAX-based health care information system targeted primarily to community hospitals with 100 to 400 beds. The system supports clinical, financial, administrative, and decision support applications. There are currently 50 ALLEGRA clients.

- EXACT® is a distributed system with clinical applications processed on in-hospital DEC or IBM computers, and financial applications processed remotely at the SMS Information Systems Center.

- SMS' current DEC VAX-based Laboratory System, marketed and supported by the Laboratory Products Division, includes Anatomic Pathology and Blood Bank applications, and a MicroVAX-based on-line instrument interface capability. The system can serve any single hospital or multi-entity environment and can be delivered as part of an integrated hospital system or on a standalone basis.

- Professional services provided to hospitals include client site facilities management, education, custom programming, proprietary network design, system installation, and consulting.

Copyright 1989 by INPUT. Reproduction Prohibited.

- During 1988, the Decision Support Division provided programming and analysis projects for clients, and research assignments for third parties, including government agencies.

- SMS has announced the following agreements:

 - In April 1988 SMS announced a research and development agreement with CliniCom and Scripps Memorial Hospitals, Inc. of La Jolla (CA). The agreement will link the CliniCom handheld terminal to the SMS Patient Management and Pharmacy Systems to quantify the clinician's needs for information at the bedside.

 - In March 1988 SMS and Atwork Corporation of Chapel Hill (NC) announced they are jointly marketing three microcomputer-based nurse management information systems developed by Atwork and designed for integration into SMS' health care information systems.

 - The three systems include the Automated Nurse Staffing Office System, the Operating Room Scheduling Office System, and the Recruitment Manager.

SMS services over 400 medical practices representing over 10,000 physicians nationwide. The company provides the following products and services to physician groups:

- SIGNATURE^{R} consists of interrelated physician applications and subsystems designed to provide financial, clinical, and administrative information processing support for medical groups of all sizes.

 - SIGNATURE is an on-line, interactive system. Basic application modules include Architecture, Decision Control, Patient Management, Guarantor/Patient Billing, Insurance Processing, Accounts Receivable Management, and Physician Production Analysis.

 - Optional applications available include Advanced Collection Workstation, Medical Records Chart Tracking, Clinical Patient Profiles, AD HOC Reporting, and Appointment Scheduling.

 - SIGNATURE is available as an in-house or as a remote computing option. All configurations operate using IBM and compatible computers under MVS.

 - There are currently over 100 SIGNATURE clients.

Copyright 1989 by INPUT. Reproduction Prohibited.

- The Physicians Office System (POS) is an in-house microcomputer-based office management system targeted to small physician practices of up to five physicians.
 - POS includes all functions related to patient registration, charge and payment entry, patient and insurance billing, receivables management and reporting, and patient charting. Other modules are available to access and interact with data in the system's data base.
 - POS can be used to access SMS mainframe hospital systems to preadmit patients, order tests, view admission/discharge/transfer (ADT) data, and obtain lab results.
- SMS continues to support, but no longer actively markets, the MED-GROUP, PBS, and PBS2000 products.

SMS' local-area network product, HARMONY, facilitates communications within medical complexes and among affiliated institutions in the same geographic area.

Industry Markets

Virtually 100% of SMS' 1988 revenue was derived from the medical industry. Acute-care hospitals accounted for the majority, with the remainder from physician group practices and clinics.

SMS currently has one federal-funded hospital client, the Philadelphia Veterans' Hospital.

Geographic Markets

The majority of SMS' 1988 revenue was derived from the U.S. INPUT estimates less than 5% was derived from international locations.

SMS currently has contracts with hospitals in 47 states, the District of Columbia, and Puerto Rico. The company also has hospital contracts in Canada, the U.K., Ireland, The Netherlands, West Germany, and Spain.

U.S. branch offices are located in Ann Arbor (MI); Atlanta (GA); Boston (MA); Charlotte (NC); Chicago (IL); Cleveland and Columbus (OH); Dallas (TX); Denver (CO); Indianapolis (IN); Kansas City (KS); Los Angeles, Oakland, San Francisco, and Santa Barbara (CA); Miami (FL); Milwaukee (WI); Nashville (TN); New Orleans (LA); New York (NY); Philadelphia and

Copyright 1989 by INPUT. Reproduction Prohibited.

Pittsburgh (PA); Phoenix (AZ); Seattle (WA); Somerset (NJ); St. Louis (MO); Washington, D.C.; and Wilmington (DE). The company also has an office in San Juan (PR).

International offices are located in Canada (2), Germany, Ireland, Spain, The Netherlands, and the U.K.

Computer Hardware

SMS has the following computers installed at its data center in Malvern (PA):

- 2 IBM 3090-600Es
- 1 IBM 3090-400E
- 1 IBM 3084-Q64 (made up of two IBM 3081s)

Copyright 1989 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Graham King, President
Public Corporation, OTC
Total Employees: 4,020
Total Revenue, Fiscal Year End 12/31/87: $390,730,000

The Company

Shared Medical Systems Corporation (SMS) was formed in 1969 to provide information services to the hospital industry. In June 1976, SMS became a publicly held corporation.

SMS is the nation's leading provider of information services to the health care industry.

- The company's products and services are provided to hospitals, clinics, and physician groups for financial, administrative, and patient management applications.
- SMS currently provides remote computing, network and distributed processing services; application software products; turnkey systems; and various professional services, including proprietary network design, custom programming, and facilities management.

Revenue for 1987 reached $390.7 million, a 4% increase over 1986 revenue of $374.9 million. Net income rose 42%, from $32 million to $45.3million. A five-year financial summary follows:

Copyright 1988 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	1987	1986	1985	1984	1983
Revenue	$390,730	$374,880	$312,207	$256,753	$210,814
• Percent increase from previous year	4%	20%	22%	22%	27%
Income before taxes	$75,529	$55,300	$74,332	$62,637	$51,424
• Percent increase (decrease) from previous year	37%	(26%)	19%	22%	25%
Net income	$45,318	$31,968	$41,748	$33,756	$27,254
• Percent increase (decrease) from previous year	42%	(23%)	24%	24%	28%
Earnings per share	$1.80	$1.26	$1.66	$1.37	$1.11
• Percent increase (decrease) from previous year	43%	(24%)	21%	23%	26%

SMS management attributes the company's slowed growth in 1987 to management and product problems.

In 1986, income before taxes and net income were adversely affected by the equity in losses and write down of the company's investment in SMS International N.V. (SMSI) and the related shutdown expenses of SMSI's Japanese subsidiary.

- SMSI, which operated as a 45%-owned affiliate of SMS during 1985, was established by SMS in 1981 to provide services -- directly and through subsidiaries, joint ventures, and license arrangements -- to health care organizations outside North America. Effective June 30, 1986, SMS acquired 100% ownership of SMSI.

- The activities described above resulted in additional expenses during 1986 of approximately $30.2 million, reducing overall earnings by approximately $20 million.

Research and development expenditures were approximately $37.9 million (10% of revenue) in 1987, $34.4 million (9% of revenue) in 1986, and $28.5 million (9% of revenue) in 1985. During 1987 and 1986 the company also capitalized approximately

Copyright 1988 by INPUT. Reproduction Prohibited.

$8.7 million and $3.1 million, respectively, for certain software development costs.

SMS is currently organized into four divisions and two subsidiaries as follows:

- The Hospital Services Division provides network and distributed processing services, application software, and associated hardware to hospitals.
- The Laboratory Products Division, formed in early 1988, is dedicated specifically to the development, marketing, delivery, and support of laboratory information systems.
- The Turnkey Systems Division, formed in late 1987, is dedicated exclusively to the development, marketing, installation, and support of DEC-based turnkey hospital information systems. The division's current product line consists of the ALLEGRA™ system.
- The Physicans' Systems and Services Division provides processing, facilities management, turnkey systems, and practice management and consulting services to physician group clients.
- SMS International N.V. markets SMS products and services outside North America.
- SMS Canada provides SMS products and services in Canada.

Major competitors to SMS include the following:

- Processing competitors include McDonnell Douglas Health Systems Company and various regional firms.
- Competition from vendors providing in-house systems comes from IBM, HBO & Company, and Baxter-Travenol.
- Physicians' services competitors include Cycare and IDX.

Key Products and Services

INPUT estimates approximately 70% of SMS' 1987 revenue was derived from remote and facilities management processing services, 25% from software and hardware leases from its in-house/distributed processing and turnkey systems, and the remaining 5% from professional services.

SMS' products and services are provided to hospitals, clinics, and physician groups.

Copyright 1988 by INPUT. Reproduction Prohibited.

- The company's primary market is the approximately 3,200 non-federal acute care hospital, generally with 100 or more beds, and physician groups.

- SMS currently serves more than 1,200 hospitals and physician group practices.

- There are over 1,000 mainframes and minicomputers running SMS software installed at SMS client locations.

SMS provides over 100 applications to its hospital, clinic, and physician group clients for financial, administrative, and patient management. A summary of applications provided by SMS is shown in the exhibit.

SMS currently provides remote computing, distributed processing, and in-house systems to its hospital clients.

- The Information Systems Center processes data for more than 800 hospital and physician group clients using IBM 3090 computers. There are more than 30,000 terminals attached to the network that connect clients with the Information Systems Center.

- INDEPENDENCE SM, an IBM-based financial and patient care system targeted to large hospitals, is available as a remote computing service and as an in-house system for IBM 43XX and 30XX computers.

 - INDEPENDENCE In-house Computing Option (ICO) is targeted to large hospitals that require an in-house system.

 - SMS' INDEPENDENCE Remote Computing Option (RCO) allows hospitals to run their financial and clinical applications at SMS' Information Systems Center on dedicated computers.

 - Over 100 clients have INDEPENDENCE installed as an in-house system and approximately 15 hospitals are using the Remote Computing Option.

Copyright 1988 by INPUT. Reproduction Prohibited.

EXHIBIT

SMS APPLICATIONS

APPLICATION AREA	APPLICATION AREA
Financial Management • Inpatient Billing • Advanced Outpatient • Physicians Billing • General Ledger and Statistics • Risk Management • Planning • Marketing Support • Payroll • Time and Attendance • Personnel • Human Resources • On-line Account Management • On-line Cost Accounting Management • On-line Materials Management • Inventory Control • Accounts Payable • Accounts Receivable • Property Accounting Management • Ambulatory Information System • Financial Patient Index • Master Patient Index **Administration** • Administration, Planning, and Statistics • Census • Comparative Statistics • Discharge Planning • Infection Control • Medical Records • Professional Services • Quality Assurance • Risk Management • Tumor Registry • Utilization Review • DRG • Drug Utilization Review • Marketing • Mortality Rate Analysis	**Patient Care** • Admissions • Care Planning • Chart Location and Delinquency • Clinic Scheduling • Inpatient Registration • Laboratory/Blood Bank • Laboratory/Anatomic Pathology • Order Processing • Results Reporting • Outpatient Registration • Nurse Staffing • Patient Care Plans • Patient Identification • Resource Scheduling • Pharmacy • Radiology • Reregistration • Dietary • Remote Physician Access **Physicians' Systems** • Architecture • Decision Control • Patient Management • Guarantor/Patient Billing • Insurance Processing • Accounts Receivable • Physician Production Analysis • Advanced Collection Workstation • Medical Reords Chart Tracking • Clinical Patient Profiles • Ad Hoc Reporting • Appointment Scheduling **Other** • HARMONY • Development Office System • Computer-Aided Instruction • Professional Staff Credentialing

Copyright 1988 by INPUT. Reproduction Prohibited.

- ALLEGRA is an integrated DEC VAX-based health care information system targeted primarily to community hospitals with 100 to 400 beds. The system supports clinical, financial, administrative, and decision support applications.
 - ALLEGRA supercedes the company's SPIRIT system, which had 35 clients.
- EXACT[R] is a distributed system, with patient care applications processed on in-hospital DEC or IBM computers, and financial applications processed remotely at the SMS Information Systems Center.
- SMS' current DEC VAX-based Laboratory System, marketed and supported by the newly created Laboratory Products Division, includes Anatomic Pathology and Blood Bank applications, and a MicroVAX-based on-line instrument interface capability. The system can serve any single hospital or multi-entity environment and can be delivered as part of an integrated hospital system or on a standalone basis.
- Professional services provided to hospitals include client site facilities management, education, custom programming, proprietary network design, system installation, and consulting.
- SMS has announced the following agreements:
 - In April 1988 SMS announced a research and development agreement with CliniCom and Scripps Memorial Hospitals, Inc. of La Jolla (CA) which will link the CliniCom handheld terminal to the SMS Patient Management and Pharmacy Systems to quantify the clinician's needs for information at the bedside.
 - In March 1988 SMS and Atwork Corporation of Chapel Hill (NC) announced they are jointly marketing three microcomputer-based nurse management information systems developed by Atwork and designed for integration into SMS' health care information systems.
 - The three systems include the Automated Nurse Staffing Office System, the Operating Room Scheduling Office System, and the Recruitment Manager.

SMS services over 400 medical practices representing over 8,000 physicians nationwide. The company provides the following products and services to physician groups:

Copyright 1988 by INPUT. Reproduction Prohibited.

- SIGNATURE[R] consists of interrelated physician applications and subsystems designed to provide financial, clinical, and administrative information processing support for medical groups of all sizes.

 - SIGNATURE is an on-line, interactive system. Basic application modules include: Architecture, Decision Control, Patient Management, Guarantor/Patient Billing, Insurance Processing, Accounts Receivable Management, and Physician Production Analysis.

 - Optional applications available include: Advanced Collection Workstation, Medical Records Chart Tracking, Clinical Patient Profiles, AD HOC Reporting, and Appointment Scheduling.

 - SIGNATURE is available as an in-house or as a remote computing option. All configurations operate using IBM and compatible computers under MVS.

 - There are currently over 30 SIGNATURE clients.

- The Physicians Office System (POS) is an in-house microcomputer-based office management system targeted to small physician practices of up to five physicians.

 - POS includes all functions related to patient registration, charge and payment entry, patient and insurance billing, receivables management and reporting, and patient charting. Other modules are available to access and interact with data in the system's data base.

 - POS can be used to access SMS mainframe hospital systems to preadmit patients, order tests, view admission/discharge/transfer (ADT) data, and obtain lab results.

 - POS ranges in price from $7,500 to $10,000.

- SMS continues to support, but no longer actively markets, the MED-GROUP, PBS, or PBS2000 products.

SMS' local area network product, HARMONY, facilitates communications within medical complexes and among multiple affiliated institutions in the same geographic area. The product ranges in price from $50,000 to $150,000 and includes workstations, file servers, and peripherals.

Copyright 1988 by INPUT. Reproduction Prohibited.

Industry Markets

One hundred percent of SMS' 1987 revenue was derived from the medical industry. Acute-care hospitals accounted for the majority, with the remainder from physician group practices and clinics.

Geographic Markets

The majority of SMS' 1987 revenue was derived from the U.S. INPUT estimates less than 5% was derived from international locations.

SMS currently has contracts with hospitals in 47 states, the District of Columbia, and Puerto Rico. The company also has hospital contracts in Canada, the U.K., Ireland, The Netherlands, Germany, and Spain.

U.S. branch offices are located in Ann Arbor (MI); Atlanta (GA); Boston (MA), Charlotte (NC), Chicago (IL), Cleveland and Columbus (OH), Dallas (TX), Denver (CO), Indianapolis (IN), Kansas City (KS), Los Angeles, Oakland, and San Francisco (CA), Miami (FL), Milwaukee (WI), Nashville (TN), New Orleans (LA), New York (NY), Philadelphia and Pittsburgh (PA), Phoenix (AZ), Seattle (WA), Somerset (NJ), Washington, D.C., and Wilmington (DE). The company also has an office in San Juan (PR).

International offices are located in Canada (2), Germany, Ireland, Spain, The Netherlands, and the U.K.

Computer Hardware

SMS has the following computers installed at its data center in Malvern (PA):

- 1 IBM 3090-400E.
- 2 IBM 3090-400s.
- 2 IBM 3084-Q64s.
- 1 IBM 4381.
- 1 IBM 4341.

SMS is moving towards a network that is based primarily on satellite transmission. This network will include earth stations at both its Information Systems Center and each client location, with no primary dependence on land lines. Some of the company's clients are currently using this network.

Copyright 1988 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Public Corporation, OTC
Total Employees: 2,800
Total Revenue, Fiscal Year End 12/31/84: $256,752,968

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	$256,753	$210,814	$165,772	$131,616	$106,581
. Percent increase from previous year	22%	27%	26%	23%	29%
Income before taxes	$ 62,637	$ 51,424	$ 41,024	$ 32,950	$ 26,216
. Percent increase from previous year	22%	25%	25%	26%	22%
Net income	$ 33,756	$ 27,254	$ 21,373	$ 16,607	$ 13,289
. Percent increase from previous year	24%	28%	29%	25%	23%
Earnings per share	$ 1.37	$ 1.11	$ 0.88	$ 0.69	$ 0.55
. Percent increase from previous year	23%	26%	28%	25%	22%

SOURCE OF REVENUE

- Shared Medical Systems reports that approximately 60% of total revenue was derived from services associated with remote processing, 32% was derived from services and products associated with processing done on the clients' premises, and 8% was derived from the Physician Services Division.

- INPUT estimates that approximately 75% of Shared Medical Systems' 1984 revenue was derived from processing services, 20% from software/hardware leases and associated maintenance services for its distributed processing/turnkey systems, 2% from professional services (includes facilities management, custom programming, and consulting services), 1% from software licenses for in-hospital systems, and 2% from practice management services.

©1985 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Public Corporation, OTC
Total Employees: 2,800
Total Revenue, Fiscal Year End 12/31/84: $256,752,968

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	$256,753	$210,814	$165,772	$131,616	$106,581
. Percent increase from previous year	22%	27%	26%	23%	29%
Income before taxes	$ 62,637	$ 51,424	$ 41,024	$ 32,950	$ 26,216
. Percent increase from previous year	22%	25%	25%	26%	22%
Net income	$ 33,756	$ 27,254	$ 21,373	$ 16,607	$ 13,289
. Percent increase from previous year	24%	28%	29%	25%	23%
Earnings per share	$ 1.37	$ 1.11	$ 0.88	$ 0.69	$ 0.55
. Percent increase from previous year	23%	26%	28%	25%	22%

SOURCE OF REVENUE

- Shared Medical Systems reports that approximately 60% of total revenue was derived from services associated with remote processing, 32% was derived from services and products associated with processing done on the clients' premises, and 8% was derived from the Physician Services Division.

- INPUT estimates that approximately 75% of Shared Medical Systems' 1984 revenue was derived from processing services, 20% from software/hardware leases and associated maintenance services for its distributed processing/turnkey systems, 2% from professional services (includes facilities management, custom programming, and consulting services), 1% from software licenses for in-hospital systems, and 2% from practice management services.

©1985 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

R. James Macaleer, Chairman and CEO
Mark S. Levitan, President
Public Corporation, OTC
Total Employees: 2,488
Total Revenue, Fiscal Year End 12/31/83: $210,814,000

THE COMPANY

- Shared Medical Systems (SMS) was formed in 1969 by R. James Macaleer, Harvey J. Wilson, and Clyde Hyde to provide computer services to the hospital industry. The three founders were former IBM marketing representatives engaged in selling in-house systems to hospitals. In June 1976, SMS became a publicly held corporation.

- SMS is the largest computer services vendor to the hospital industry. Network and distributed processing services and applications software are provided to nonfederal acute-care hospitals. The company also provides processing services, facilities management, and applications software to group medical practices. In 1983 the company became a value-added remarketer for IBM.

- SMS's 1983 revenue reached $210.8 million, a 27% increase over 1982 revenue of $165.8 million. Net income rose 28% from $21.4 million in 1982 to $27.3 million in 1983. A five-year financial summary follows:

© 1984 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

FISCAL YEAR / ITEM	1983	1982	1981	1980	1979
Revenue	$210,814	$165,772	$131,616	$106,581	$82,803
. Percent increase from previous year	27%	26%	23%	29%	31%
Income before taxes	$ 51,424	$ 41,024	$ 32,950	$ 26,216	$21,566
. Percent increase from previous year	25%	25%	26%	22%	20%
Net income	$ 27,254	$ 21,373	$ 16,607	$ 13,289	$10,762
. Percent increase from previous year	28%	29%	25%	23%	25%
Earnings per share (a)	$ 1.11	$ 0.88	$ 0.69	$ 0.55	$ 0.45
. Percent increase from previous year	26%	28%	25%	22%	25%

(a) Restated to reflect a two-for-one stock split effective December 1982.

- SMS management attributes increased revenue in 1983 and 1982 to the expanded use of available services by existing customers and the addition of new products and services, including a local area network for hospitals.

- Research and development expenditures were approximately $17.6 million (8% of revenue) in 1983, as compared to $13.7 million (8% of revenue) in 1982, and $10.6 million (8% of revenue) in 1981.

- Recent acquisitions made by SMS in the group practice services area include the following:

 - In 1983 the company acquired Medical Associates Inc. located in Wilmington (DE). Terms of the acquisition were not disclosed.

 . Medical Associates markets facilities management and associated consulting computer services in the Middle Atlantic.

 . Medical Associates now operates within the Physicians Services Division. Results of operations in 1983 were not material.

 - In 1983 SMS acquired Medicount Inc. Terms of the acquisition were not disclosed.

 . Medicount provides turnkey systems to physicians.

© 1984 by INPUT. Reproduction Prohibited.

 - Medicount's operations were merged with the Physicians Services Division.

- Revenue for the three months ending March 31, 1984 was $59.8 million, a 23% increase over $48.7 million for the same period in 1983. Net income for the period rose 25% from $6 million in 1983 to $7.5 million in 1984.

- SMS is currently organized into two divisions as follows:

 - The Hospital Services Division provides network and distributed processing services, applications software, and associated hardware to nonfederal acute-care hospitals.

 - The Physicians Services Division, formed in 1980, markets processing, facilities management, and turnkey systems to medical and hospital-based group practices and clinics.

- SMS has expanded its organization to offer its products outside of the U.S.

 - In 1981 SMS completed negotiations for the establishment of SMS International N.V. (SMSI). SMSI was formed to provide services--directly and through subsidiaries, joint ventures, and license arrangements—to health care organizations outside of North America.

 - During 1983 and 1982 SMS invested $4.5 million and $2.9 million, respectively, in SMSI common and convertible preferred stock, net of preferred dividends and royalties. SMS has committed to invest, by April 1984, $4.2 million in additional shares of redeemable convertible preferred stock.

 - SMS has a minority equity and voting interest of less than 20% and is using the cost method of accounting for this investment.

 - SMSI is primarily in a start-up phase and has incurred losses through December 31, 1983.

 - SMS is participating, along with a Canadian investment company, in the recently organized SMS Canada, Ltd. to market its services.

 - SMS does not expect any significant impact on revenue from international operations until late in the decade.

- As of December 1983 SMS had 2,488 employees. The company currently has 2,700 employees.

- Major competitors to SMS in the health care industry include the following:

 - Processing competitors include the Health Services Division of MCAUTO, Blue Cross, and various regional processing firms.

© 1984 by INPUT. Reproduction Prohibited.

- Competition from vendors providing in-house systems comes from IBM, Technicon Data Systems Corporation, HBO & Company, and Dynamic Controls Corporation (Baxter-Travenol).

- Professional services competitors include CyCare and IDS.

KEY PRODUCTS AND SERVICES

- INPUT estimates approximately 80% of SMS's 1983 revenue was derived from processing services, 17% from software and hardware leases from its distributed processing/turnkey systems, and the remaining 3% from practice management services and software licenses for in-hospital financial systems.

- SMS currently provides processing services to over 625 hospitals. The company's primary market for these services is the 3,100 nonfederal, acute-care hospitals, generally with 100 or more beds. A five-year summary of SMS's hospital client base follows:

SMS
HOSPITAL CLIENT BASE STATISTICS
(as of December 1983)

ITEM \ FISCAL YEAR	1983	1982	1981	1980	1979
Acute-care hospitals under contract	625	580	530	485	440
Acute-care beds served	172,000	159,000	147,000	135,000	123,000
Average revenue per acute-care bed per day	$3.25	$2.82	$ 2.42	$ 2.07	$ 1.80
COMMAND installations	600	550	400	330	210
ACTION installations	210	170	137	110	89

- In 1983 the average SMS client was a 290-bed hospital.

- SMS's processing services are provided through contracts having an initial term of five years, although the company has signed contracts ranging from one to seven years. No more than one-fourth of SMS contracts expire in any one year.

 . During 1983, 180 SMS hospital clients renewed their contracts. Among these were three large groups representing nearly 40 hospitals and 20,000 beds.

© 1984 by INPUT. Reproduction Prohibited.

- Processing services and products offered to hospital clients include the following, as shown in the exhibit.
 - The SMS Financial Management System (FMS) permits a hospital to properly charge for its services; to collect monies owed by patients, insurance companies, and government agencies; to pay its suppliers; and to properly manage human resources, inventory, and fixed assets (equipment).
 - Specific applications available are shown in the exhibit.
 - The SMS data center operates both in the interactive and batch modes and delivers output via video display, hard copy, or microfiche.
 - There are currently over 600 hospitals using these financial management processing services.
 - During 1983 SMS announced the availability of its Financial Management System software to hospitals for installation on in-house, client-operated IBM 4300 series computers.
 - The software, SURPASS, is marketed to large hospitals and hospital groups.
 - There are currently six clients using the software in-house.
 - The ACTION® patient care system connects all hospital departments to a localized data base of patient information stored on an in-house computer, permitting data collection, intra-hospital communications, and departmental support.
 - The local data base can be accessed interactively by hospital personnel to add, delete, transmit, and retrieve patient information wherever ACTION departmental visual displays and/or printers are installed.
 - Departmental applications offered as part of ACTION are shown in the exhibit.
 - Data collected via ACTION is also used to automatically update utilization review and infection control statistics.
 - ACTION "1500" runs on DEC minicomputers installed at the hospital and interfaces with the SMS data center for access to the Financial Management System. Price of the system ranges from $2.00 to $4.00 per patient day. There are over 160 ACTION "1500" systems installed.

© 1984 by INPUT. Reproduction Prohibited.

EXHIBIT

APPLICATIONS AVAILABLE
SMS

APPLICATION AREA/PRODUCT NAME
• OPERATING ENVIEONMENT – IBM 3033 - AP, OS/MVS – IBM 3081 - AP, OS/MVS
• FINANCIAL MANAGEMENT SYSTEM – INPATIENT ACCOUNTING – OUTPATIENT ACCOUNTING – PHYSICIANS BILLING – GENERAL LEDGER AND STATISTICS – RISK MANAGEMENT – PLANNING – MARKETING SUPPORT – PAYROLL – TIME AND ATTENDANCE – PERSONNEL – INVENTORY CONTROL – ACCOUNTS PAYABLE – PROPERTY ACCOUNTING MANAGEMENT
• COMMAND – ADMINISTRATION, PLANNING AND STATISTICS – CENSUS – COMPARATIVE STATISTICS – DISCHARGE PLANNING – INFECTION CONTROL – MEDICAL RECORDS – PROFESSIONAL SERVICES – QUALITY ASSURANCE – RISK MANAGEMENT – TUMOR REGISTRY – UTILIZATION REVIEW – DRG (DIAGNOSIS RELATED GROUPS) – DRUG UTILIZATION REVIEW – MARKETING

APPLICATION AREA/PRODUCT NAME
• ACTION – ADMISSIONS – CARE PLANNING – CHART LOCATION AND DELINQUENCY – CLINIC SCHEDULING – INPATIENT REGISTRATION – LABORATORY – ORDER PROCESSING – OUTPATIENT REGISTRATION – NURSE STAFFING – NURSE STATION ENTRY – PATIENT IDENTIFICATION – PATIENT SCHEDULING – PHARMACY – RADIOLOGY – REREGISTRATION
• PBS – REGISTRATION/ADMISSION – INSURANCE VERIFICATION – PATIENT INFORMATION CHANGES – CHARGE/CREDIT POSTING – BILLING – ACCOUNTS RECEIVABLE FOLLOW-UP – PAYMENT/ADJUSTMENT POSTING – BAD DEBT – FINANCIAL REPORTING
• PBS 2000 – PBS APPLICATIONS PLUS INTERACTIVE REGISTRATION, APPOINTMENT SCHEDULING, POSTING, AND PATIENT INFORMATION
• GENERAL SYSTEMS OFFERINGS – EQUIPMENT (MAINFRAMES, MINICOMPUTERS, MICROCOMPUTERS) – AD HOC REPORTING – REPORT SCHEDULING – SERVICE AND OPERATION – SMS/NET

© 1984 by INPUT. Reproduction Prohibited.

- In 1982 SMS introduced ACTION "2000," a standalone system that runs on IBM 4300 series computers.
 - Additional capabilities include light pen data entry, color CRTs, screen builders, report writers, and personal computer support.
 - This system is targeted to large hospitals and teaching hospitals with more than 350 beds.
 - Since January 1983 over 30 hospitals have committed to install this system. Ten ACTION "2000" systems are currently installed.

- SMS's COMMAND system is an on-line patient reporting system that automatically integrates ACTION patient care and Financial Management System information.
 - COMMAND maintains a data base of patient historical, financial, and demographics data.
 - The system provides a standard set of reports, plus the capability to design custom reports for many areas, as shown in the exhibit.
 - COMMAND accommodates various patient classification methods, including Diagnosis Related Groups (DRGs), which provide 467 categories of cases based on age, sex, diagnosis, procedures, and discharge destination.
 - COMMAND automatically determines the appropriate DRG and assigns a disease severity index to each patient case. DRG analysis measures the average resources required (length of stay, equipment, drugs, personnel time, etc.) for each of the 467 categories of related patients. From this analysis the average cost per DRG category is calculated and assigned. The data is useful for hospital utilization review, budgeting, forecasting, and general management.
 - During 1983 congressional legislation mandated the Prospective Payment System (PPS) for Medicare reimbursement. PPS assigns a fixed fee to each DRG which is paid regardless of costs incurred. SMS has modified the patient accounting and COMMAND systems so hospitals can determine which DRGs are costing more than the allowable reimbursement and can implement corrective measures.
 - COMMAND is also offered as part of the ACTION "2000" and SURPASS systems.

© 1984 by INPUT. Reproduction Prohibited.

- In May 1983 SMS introduced SMS/NET, a local area network using specially designed communications software and microprocessors.

 . SMS/NET allows the automatic exchange of information between computers, makes data entered for one application available to others, and allows users of similar computers to provide information support to one another.

 . SMS/NET permits direct data access and on-line query to commercial medical data bases.

 . SMS/NET facilitates the integration of personal computers into the SMS network. A personal computer connected to SMS/NET can serve as an inquiry terminal, a data entry device, or a standalone processor. Information from various SMS data bases can be transferred to a personal computer whereby the user can process it with a program designed for a specific application or with an electronic spreadsheet or word processing software.

 . Distributed processing functions are available through SMS/NET on a personal computer. Users can access certain Financial Management and ACTION systems applications for processing at their own departments.

 . SMS has installed over 100 SMS/NET systems and has sold more than 200 IBM PCs and software to hospital and physician group clients. Personal computer software marketed by SMS includes applications developed by SMS for fund raising and nurse scheduling as well as third-party spreadsheet and word processing packages.

 . SMS/NET runs on IBM PC and XT microcomputers.

- SMS introduced MED-VERSE in 1980, a distributed word processing system integrated with COMMAND and ACTION.

 . MED-VERSE provides departmental word processing intelligence for keeping medical records, scheduling, indexing, etc., locally.

 . MED-VERSE ties into the hospital data base and can be used for inputting data at the department level. Standard or custom reports can be created from the data base. MED-VERSE now also supports personal computers as terminals.

 . MED-COACH, a computer-based training tool for hospital and service education, is also available via MED-VERSE.

 . MED-VERSE currently has 30 users.

© 1984 by INPUT. Reproduction Prohibited.

- During 1980, SMS established the Physicians Services Division to market specialized processing services to medical practices, free-standing clinics, and hospital-based group practices.

 - PBS is an on-line billing and reporting service used by over 250 group medical practices and clinics. Applications available on the network are shown in the exhibit.

 - In 1981 SMS introduced PBS 2000, an on-line patient billing and information system with added capabilities including light pen data entry, financial modeling, appointment scheduling, and access to a variety of medical data bases.

 . PBS 2000 applications are listed in the exhibit.

 . SMS currently has over 25 PBS 2000 clients.

 - In 1983 SMS introduced MED-GROUP, a software system for in-house use by group medical practices.

 . Applications available include the following:

 - Patient registration.
 - Patient inquiry.
 - Billing management.
 - Accounts receivable management.
 - Monthly procedure summaries.
 - Monthly collection percentages reports.
 - Selective analysis.
 - Appointment booking.
 - Equity accounting.
 - HMO (Health Maintenance Organization) reporting.
 - Patient recall.
 - Patient encounter.

 . MED-GROUP runs on the IBM System 36 computer. There are currently over 10 installations.

 - SMS also offers practice management services for small group practices and larger groups with specialized administrative requirements.

 . SMS manages all billing, collection, and related administrative activities and provides associated processing services at the SMS data center.

 . SMS currently has over 150 practice management clients.

© 1984 by INPUT. Reproduction Prohibited.

INDUSTRY MARKETS

- One hundred percent of SMS's 1983 revenue was derived from the medical industry. Acute-care hospitals accounted for the majority, with the remainder from group practices and clinics.

GEOGRAPHIC MARKETS

- One hundred percent of SMS's 1983 revenue was derived from the U.S.
- SMS currently has contracts with hospitals in 46 states, the District of Columbia, and Puerto Rico.
- U.S. branch offices are located in Ann Arbor (MI), Atlanta, Bellevue (WA), Brentwood (TN), Burlington (MA), Charlotte (NC), Columbus (OH), Denver, El Segundo (CA), Hollywood (FL), Independence (OH), Indianapolis, McLean (VA), Menomonee Falls (WI), Metairie (LA), New York City, Phoenix, Pittsburgh, Pleasanton (CA), Richardson (TX), Schaumburg (IL), Shawnee Mission (KS), Somerset (NJ), St. Louis, and Wayne (PA). The company also has an office in Puerto Rico.
- SMS products and services are marketed in six foreign countries by SMSI, including Ireland, England, the Netherlands, Germany, Spain, and Japan. SMS Canada, Ltd. markets SMS services in Canada.

COMPUTER HARDWARE AND SOFTWARE

- SMS has the following computers installed at its data center in Malvern (PA):
 - 2 IBM 3081s, OS/MSV.
 - 2 IBM 3033 APs, OS/MVS.
- Clients access the SMS data center via leased lines.

© 1984 by INPUT. Reproduction Prohibited.

FINANCIAL UPDATE TO HIGHLIGHT DATED MAY 1982

SHARED MEDICAL SYSTEMS CORPORATION
51 Valley Stream Parkway
Malvern, PA 19355
(215) 296-6300

Harvey J. Wilson, President
Public Corporation, OTC
Total Employees: 1,919
Total Revenue, Fiscal Year End 12/31/82: $165,772,000

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM / FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	$ 165,772	$ 131,616	$ 106,581	$ 82,803	$ 63,051
. Percent increase from previous year	26%	23%	29%	31%	38%
Income before taxes	$ 41,024	$ 32,950	$ 26,216	$ 21,566	$ 18,028
. Percent increase from previous year	25%	26%	22%	20%	36%
Net income	$ 21,373	$ 16,607	$ 13,289	$ 10,762	$ 8,599
. Percent increase from previous year	29%	25%	23%	25%	27%
Earnings per share (a)	$ 0.88	$ 0.69	$ 0.55	$ 0.45	$ 0.36
. Percent increase from previous year	28%	25%	22%	25%	N/A

(a) Restated to reflect a two-for-one stock split effective December 1982.

SOURCE OF REVENUE

- INPUT estimates that Shared Medical Systems derived 85% of its 1982 revenue from processing services and 15% from software and hardware leases from its distributed processing/turnkey systems.

©1983 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS
CORPORATION
P.O. Box 675
King of Prussia, PA 19406
(215) 296-6300

Harvey J. Wilson, President
Public Corporation, OTC
Total Employees: 1,700
Total Revenue, Fiscal Year
End 12/31/81: $131,616,000

THE COMPANY

- Shared Medical Systems (SMS) was formed in 1969 by R. James Macaleer, Harvey J. Wilson, and Clyde Hyde to provide computer services to the hospital industry. The three founders were former IBM marketing representatives engaged in selling in-house systems to hospitals. In June 1976, SMS became a publicly held corporation.

- SMS is the largest computer services vendor to the hospital industry. Both network and minicomputer-based services are provided. Processing services to physicians are also offered through the SMS network.

- SMS's 1981 revenue increased 23% to $131.6 million. Income before taxes increased 26% to $32.95 million and remained at approximately 25% of revenue. Net income increased 25% to $16.6 million. A five-year financial summary follows:

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

FISCAL YEAR / ITEM	1981	1980	1979	1978	1977
Revenue	$131,616	$106,581	$82,803	$63,051	$45,686
. Percent increase from previous year	23%	29%	31%	38%	29%
Income before taxes	$32,950	$26,216	$21,566	$18,028	$13,268
. Percent increase from previous year	26%	22%	20%	36%	43%
Net income	$16,607	$13,289	$10,762	$ 8,599	$ 6,793
. Percent increase from previous year	25%	23%	25%	27%	29%
Per share income	$ 1.37	$ 1.10	$ 0.90	$ 0.72	$ 0.58
. Percent increase from previous year	25%	22%	25%	24%	23%

©1982 by INPUT. Reproduction Prohibited.

- SMS's 1981 expenditures on research and development increased 29% to $10.6 million. 1980 expenditures of $8.2 million were a 31% increase over the 1979 level of $6.2 million.

- Revenue for the three-month period ending March 1982, was $37.6 million, an increase of 24% over $30.3 million for the same period in 1981. Pretax income increased 21% to $9.3 million; net income rose 24% to $4.8 million. Per share income increased 22% to $0.39.

- The primary processing competitor of SMS is the Health Services Division of MCAUTO. Competition from vendors providing in-house systems comes from IBM, Technicon Medical Information Systems, and HBO.

- SMS is expanding its organization to offer its products outside of the United States.

 - During 1981, SMS completed negotiations for the establishment of an international corporation to market its services. This company, SMS International (SMSI), is owned by SMS and certain SMSI executives. By means of licensing agreements, acquisitions, and joint ventures, SMSI now operates in five countries.

 - SMS is participating, along with a Canadian investment company, in the recently organized SMS Canada, Ltd. to market its services.

 - SMS does not expect any significant impact on revenue from international operations until late in the decade.

KEY PRODUCTS AND SERVICES

- INPUT estimates SMS derived approximately 85% ($111.9 million) of its 1981 revenue from processing services and 15% ($19.7 million) from software and hardware leases from its distributed processing/turnkey systems.

- The company has penetrated approximately 17% of its targeted marketplace, the 3,000 nonfederal, acute-care hospitals with 100 beds or more. The following five-year statistical summary represents SMS's hospital client base:

©1982 by INPUT. Reproduction Prohibited.

SMS
CLIENT BASE STATISTICS
(as of December 1981)

	1981	1980	1979	1978	1977
Acute-care hospitals under contract*	530	485	440	390	345
Acute-care beds served	147,000	135,000	123,000	111,000	99,000
Average revenue per acute-care bed per day	$ 2.42	$ 2.07	$ 1.80	$ 1.58	$ 1.40
COMMAND installations	400	330	210	72	-
ACTION installations	137	110	89	65	38

* Restated to exclude 35 American Medicorp Hospitals (7,000 beds) and long-stay hospitals and beds.

- In 1981, the average SMS client was a 280-bed hospital.

- Processing services provide the basic accounting applications to client hospitals, as seen in the exhibit. The SMS data center operates both in interactive and batch modes and delivers output via video display, hard copy, or microfiche.

 - SMS's data services are provided through contractual arrangements usually having an initial term of five years. Some contracts range from three to seven years; no more than one-fourth of the company's contracts expire in any one year. Loss of existing clients normally runs less than 3% each year. Most contracts include adjustments for inflation tied to the Consumer Price Index.

- For hospitals with more advanced information needs, SMS offers COMMAND. Introduced in 1978, COMMAND is an on-line patient reporting system which stores patient historical, financial, and demographic data.

 - COMMAND provides a standard set of reports plus the capability to design custom reports for many areas, as shown in the exhibit. Both financial and clinical data is included in these reports.

 - In 1980, SMS introduced a COMMAND module to perform DRG (Diagnosis Related Group) data collection, analysis, and reporting from the existing patient information data base.

 . DRG analysis of a hospital measures the average resources required (length of stay, equipment, drugs, personnel time, etc.)

©1982 by INPUT. Reproduction Prohibited.

EXHIBIT
APPLICATIONS AVAILABLE
SMS

APPLICATION AREA/PRODUCT NAME
• Operating Environment – IBM 370/168 - AP, OS/MVS – IBM 3033 - AP, OS/MVS – IBM 3081 - AP, OS/MVS • Network Service Offerings – Accounts Payable – Accounts Receivable – Corporate Information System – Financial Patient Index – Fixed Asset Accounting – General Ledger – Inpatient Accounting – Inventory – Outpatient Accounting – Payroll – Personnel Administration – Third-party Logs – Utilization Register – Physician Billing – Word Processing (MED-VERSE) – Medplan'r • COMMAND Offerings – Administration, Planning, and Statistics – Census – Comparative Statistics – Discharge Planning – Infection Control – Medical Records – Professional Services – Quality Assurance – Risk Management – Tumor Registry – Utilization Review – DRG (Diagnosis Related Groups) – Drug Utilization Review – Marketing

APPLICATION AREA/PRODUCT NAME
• ACTION Offerings – Admissions – Chart Location and Delinquency – Clinic Scheduling – Inpatient Registration – Laboratory – Order Processing – Outpatient Registration – Nurse Station Entry – Patient Identification – Patient Scheduling – Pharmacy – Radiology – Reregistration • Physicians Services Offerings – Accounts Receivable – Billing and Accounts Payable – Financial Patient Index – Fixed Asset Accounting – General Ledger – PBS 2000 – Payroll – Scheduling • General Systems Offerings – Equipment – Ad-Hoc Reporting – Report Scheduling – Service and Operation

©1982 by INPUT. Reproduction Prohibited.

for each of 383 groups of related patients. From this analysis, the average cost per DRG category is calculated and assigned.

. DRG analysis is used for hospital utilization review, budgeting, forecasting, and general management. Performance of staff to this norm can be measured and controlled.

. DRGs are being tested as a basis of reimbursement by a few third-party insurers to contain the cost of health care. Under this program, each DRG is assigned a set fee which is paid regardless of costs incurred. Hospitals are then responsible for containing their own costs to make a profit.

. SMS had 60 hospitals using this module as of December 1981.

- In 1976, SMS introduced a minicomputer-based intra-hospital communication system called ACTION, making available to hospitals applications requiring local intelligence.

 - ACTION connects all hospital departments to a local patient information data base. This data base can be accessed on-line to add, delete, or change patient information.

 - Departmental applications offered as part of the ACTION package are shown in the exhibit.

 - Although ACTION can function as a standalone system, most hospitals use it in conjunction with SMS's processing services.

 - ACTION "1500" is offered on DEC minicomputers. Price of the system ranges from $1.75 to $2.75 per patient day.

 - ACTION "2000" is being developed to operate on IBM 4341 systems and up. This system is targeted to larger teaching hospitals with more than 400 beds, and will be available in late 1982 or early 1983.

- SMS introduced MED-VERSE in 1980, a distributed word processing system integrated with COMMAND and ACTION.

 . MED-VERSE provides departmental word processing intelligence for keeping medical records, scheduling, indexing, etc., locally.

 . MED-VERSE ties into the hospital data base and can be used for inputting data at the department level. Standard or custom reports can be created from the data base.

 . MED-VERSE provides computer-based training for hospital and service education.

©1982 by INPUT. Reproduction Prohibited.

 - MED-VERSE is priced at $300 to $500 per workstation and currently has several users.

- In late 1981, SMS introduced Medplan'r, an interactive timesharing financial system integrated with COMMAND, ACTION, and certain SMS financial management systems.
 - Medplan'r provides Medicare/Medicaid/State cost reporting, forecasting, growth and comparisons, and other planning functions.
 - The seven modules available include:
 - Forecasting.
 - Budgeting.
 - Income and third-party analysis.
 - State and federal regulating analysis.
 - Management reporting.
 - Performance measurement.
 - Sensitivity analysis and comparative reporting.
 - The Medplan'r timesharing service costs $2,000 to $3,000 per month. There are currently ten users of the system.
- During 1980, SMS established the Physicians Services Division to market specialized processing services to medical practices, free-standing clinics, and hospital-based group practices.
 - In 1981, SMS introduced PBS 2000, an on-line system for patient registration, appointment scheduling, point-of-service billing, and accounts receivable inquiry.
 - Through the SMS Ad-Hoc Reporting capability, medical practices can design special reports on-line.
 - Financial modeling (Medplan'r) and word processing (MED-VERSE) are also available for use by medical practices.
 - Other modules currently available are shown in the exhibit.
 - In early 1982, SMS began offering facilities management services to small group practices without a full-time business staff, and to large groups with specialized administrative requirements.
 - SMS provides personnel to process both the automated and non-automated portions of patient registration, billing, accounts receivable, and revenue and management reporting.

INDUSTRY MARKETS

- One hundred percent of SMS's revenue is derived from the medical industry, primarily from hospitals. Acute-care hospitals account for most of total

©1982 by INPUT. Reproduction Prohibited.

revenue, with the remainder from physician groups and extended-care hospitals.

GEOGRAPHIC MARKETS

- Virtually all of SMS's 1981 revenue was derived from the U.S.
- SMS's clients are located in 44 states and the District of Columbia. SMS is expanding its client base outside the United States to Canada, England, Holland, Ireland, Japan, Puerto Rico, and Spain.
- The company maintains 28 branch offices.

COMPUTER HARDWARE AND SOFTWARE

- SMS has two IBM 370/168-APs, two IBM 3033-APs, and one IBM 3081-AP operating under OS/MVS.
- Clients can access the network through more than 140,000 miles of private leased lines or by satellite.

©1982 by INPUT. Reproduction Prohibited.

SHARED MEDICAL SYSTEMS
650 Park Avenue
King of Prussia, PA 19406
(215) 265-7600

Harvey J. Wilson, President
Public Corporation, OTC
Total Employees: 1,246
Total Revenue, Fiscal Year End
12/31/80: $106,580,586

THE COMPANY

- Shared Medical Systems (SMS) was formed in 1969 by R. James Macaleer, Harvey J. Wilson, and Clyde Hyde to provide computer services to the hospital industry. The three founders were former IBM marketing representatives engaged in selling in-house systems to hospitals. In June 1976, SMS became a publicly held corporation.

- SMS is the largest computer services vendor to the hospital industry. Both network and minicomputer based services are provided. Processing services to physicians are also offered through the SMS network.

- SMS 1980 revenue increased 29% to $106.6 million. Income before taxes increased 22% to $26.2 million and remained at approximately 25% of revenue. Net income increased 23%. A five-year financial summary follows:

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Revenue	$106,581	$82,803	$63,051	$45,686	$35,468
. Percent increase from previous year	29%	31%	38%	29%	57%
Income before taxes	$26,216	$21,566	$18,028	$13,268	$ 9,274
. Percent increase from previous year	22%	20%	36%	43%	99%
Net income	$13,289	$10,762	$ 8,599	$ 6,793	$ 5,247
. Percent increase from previous year	23%	25%	27%	29%	89%
Per share income (A)	$ 1.10	$ 0.90	$ 0.72	$ 0.58	$ 0.47
. Percent increase from previous year	22%	25%	24%	23%	57%

(A) Adjusted for two-for-one stock splits in December 1979 and December 1977.

©1981 by INPUT. Reproduction Prohibited.

- SMS 1980 expenditures on research and development increased 31% to $8,205,000. 1979 expenditures of $6,248,000 were a 26% increase over the 1978 level of $4,972,000.

- Revenue for the six-month period ending June, 1981, was $61,928,000, an increase of 27% over $48,775,000 for the same 1980 period. Pretax income increased 27% to $15,700,000; net income rose 27% to $7,884,000. Per share income increased 25% to $0.65.

- At the end of 1980, SMS had 1,246 employees. SMS currently has 1,390 employees segmented as follows:

-	Sales personnel	140
-	Field service representatives	280
-	Field support personnel	225
-	Analysts and programmers	420
-	Computer operations/distribution/ microfilm services	105
-	General and administrative	135
-	Engineering	85
		1,390

- The primary processing competitor of SMS is the Health Services Division of McAUTO. Competition from vendors providing in-house systems comes from IBM, Technicon Medical Information Systems, HBO, and Tymshare.

- SMS has established SMS International, a corporation to offer SMS products outside of North America. SMS does not expect any significant impact on revenue from international operations until late in the decade.

KEY PRODUCTS AND SERVICES

- INPUT estimates SMS derived approximately 85% ($90.6 million) of its 1980 revenue from processing services and 15% ($15.9 million) from software and hardware leases from its distributed processing/turnkey systems.

- The company has penetrated approximately 16% of its targeted marketplace, the 3,000 non-federal, acute-care hospitals with 100 beds or more. The following five-year statistical summary represents SMS's hospital client base:

©1981 by INPUT. Reproduction Prohibited.

SMS
CLIENT BASE STATISTICS
(as of December 1980)

	1980	1979	1978	1977	1976
Acute-care hospitals under contract*	489	440	390	345	294
Acute-care beds served	135,000	123,000	111,000	99,000	77,000
Average revenue per acute-care bed per day	$ 2.07	$ 1.80	$ 1.58	$ 1.40	$ 1.25
COMMAND installations	360	210	70	-	-
ACTION installations	129	101	71	41	-

*Restated to exclude 35 American Medicorp Hospitals (7,000 beds) and long-stay hospitals and beds.

- A few years ago the average-sized hospital served by SMS had 240 beds. In 1980, the average SMS client was a 300-bed hospital.

- In 1978, Humana Corporation acquired American Medicorp Hospitals, planning to convert all hospitals to its own system. This conversion has not occurred as scheduled and SMS is still serving a number of the hospitals. Because the future of this business base is questionable, SMS excludes these hospitals from its statistics.

- Processing services provide the basic accounting applications to client hospitals, as seen in the exhibit. The SMS data center operates both in interactive and batch modes and delivers output via video display, hard copy, or microfiche.

 - SMS's data services are provided through contractual arrangements usually having an initial term of five years. Some contracts range from three to seven years; no more than one-fourth of the company's contracts expire in any one year. Loss of existing clients normally runs less than 3% each year. Most contracts include adjustments for inflation tied to the Consumer Price Index.

- For hospitals with more advanced information needs, SMS offers COMMAND. Introduced in 1978, COMMAND is an on-line patient reporting system which stores patient historical, financial, and demographic data.

 - COMMAND provides a standard set of reports plus the capability to design custom reports for many areas, as shown in the exhibit. Both financial and clinical data is included in these reports.

©1981 by INPUT. Reproduction Prohibited.

EXHIBIT
APPLICATIONS AVAILABLE
SMS

APPLICATION AREA/PRODUCT NAME
• Operating Environment – IBM 370/168 - AP OS/MVS – IBM 3033 - AP OS/MVS • Network Service Offerings – Accounts Payable – Accounts Receivable – Corporate Information System – Financial Patient Index – Fixed Asset Accounting – General Ledger – Inpatient Accounting – Inventory – Outpatient Accounting – Payroll – Personnel Administration – Third-party Logs – Utilization Register – Physician Billing • COMMAND Offerings – Administration, Planning and Statistics – Census – Comparative Statistics – Discharge Planning – Infection Control – Medical Records – Professional Services – Quality Assurance – Risk Management – Tumor Registry – Utilization Review – DRG (Diagnosis Related Groups)

APPLICATION AREA/PRODUCT NAME
• ACTION Offerings – Chart Location and Delinquency – Clinic Scheduling – Inpatient Registration – Laboratory and Radiology – Order Processing – Outpatient Registration – Nurse Station Entry – Patient Identification – Patient Scheduling – Reregistration • Physician Billing System Offerings – Accounts Receivable – Billing and Accounts Payable – Financial Patient Index – Fixed Asset Accounting – General Ledger – Payroll – Scheduling – Word Processing (MED-VERSE) • General Systems Offerings – Equipment – Ad-Hoc Reporting – Report Scheduling – Service and Operation

©1981 by INPUT. Reproduction Prohibited.

- Use of COMMAND has increased greatly since the end of 1979. Approximately 395 (75%) of the 525 hospitals SMS served in June 1981 used the system.

- SMS introduced MED-VERSE in 1980, a distributed word processing system integrated with COMMAND. Pilot systems will be installed in 1981.

 . MED-VERSE provides departmental word processing intelligence for keeping medical records, scheduling, indexing, etc., locally.

 . MED-VERSE ties into the hospital data base and can be used for inputting data at the department level. Standard or custom reports can be created from the data base.

- In 1980, SMS introduced a COMMAND module to perform DRG (Diagnosis Related Group) data collection, analysis, and reporting from the existing patient information data base.

 . DRG analysis of a hospital measures the average resources required (length of stay, equipment, drugs, personnel time, etc.) for each of 383 groups of related patients. From this analysis, the average cost per DRG category is calculated and assigned.

 . DRG analysis is used for hospital utilization review, budgeting, forecasting, and general management. Performance of staff to this norm can be measured and controlled.

 . DRGs are being tested as a basis of reimbursement by a few third-party insurers to contain the cost of health care. Under this program, each DRG is assigned a set fee which is paid regardless of costs incurred. Hospitals are then responsible for containing their own costs to make a profit.

 . SMS had 50 hospitals using this module in June 1981.

- In 1976, SMS introduced a minicomputer-based intra-hospital communication system called ACTION, making available to hospitals applications requiring local intelligence.

 - ACTION connects all hospital departments to a local patient information data base. This data base can be accessed on-line to add, delete, or change patient information.

 - Departmental applications offered as part of the ACTION package are shown in the exhibit.

 - Although ACTION can function as a standalone system, most hospitals use it in conjunction with SMS's processing services.

©1981 by INPUT. Reproduction Prohibited.

- ACTION is offered primarily on DEC but also on Four-Phase minicomputers. The system is modular and upgradable to meet expanding requirements.

- At the end of June 1981, 150 of the 525 hospitals served (29%) used ACTION.

- Price of the system ranges for $1.25 to $2.25 per patient day.

- During 1980 SMS enhanced its Physician Billing System module of the hospital accounting system and created a separate product line. SMS is marketing the product through a newly established division to group practices of typically eight or more physicians.

 - Modules currently available in the Physician Services System are shown in the exhibit.

INDUSTRY MARKETS One hundred percent of SMS's revenue is derived from the medical industry, primarily from hospitals. Acute-care hospitals account for 93% of total revenue, with the remainder from physician groups and extended-care hospitals.

GEOGRAPHIC MARKETS

- SMS's clients are located in 44 states and the District of Columbia. Highest concentration of clients is in the western and eastern regions.

- The company maintains 25 branch offices.

COMPUTER HARDWARE

- SMS has two IBM 370/168-APs and two IBM 3033-APs operating under OS/MVS.

- Clients can access the network through more than 140,000 miles of private leased lines or by satellite.

©1981 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

SHARED MEDICAL SYSTEMS
650 Park Avenue
King of Prussia, PA 19406
(215) 265-7600

R. James Macaleer, President and Chairman
Public Corporation, OTC
Total Employees: 1,019
Total Revenues, Fiscal Year End 12/79: $82,803,000

THE COMPANY

- Shared Medical Systems (SMS) was formed in 1969 by R. James Macaleer, Harvey J. Wilson and Clyde Hyde to provide computer services to the hospital industry. The three founders were former IBM marketing representatives engaged in selling in-house systems to hospitals. In June 1976, SMS became a publicly held corporation.

- SMS is the largest computer services vendor to the hospital industry. Both network and minicomputer based services are provided. Processing services to physicians are also offered through the SMS network.

- SMS's 1979 revenues were $82.8 million, a 31% increase over 1978 revenues of $63 million. Although income before taxes increased 20% in 1979, pretax profit margins declined from 28.6% in 1978 to 26% in 1979. A five-year financial summary follows:

SHARED MEDICAL SYSTEMS
FIVE-YEAR FINANCIAL SUMMARY
($ Thousands, Except Per Share Data)

FISCAL YEAR / ITEM	1979	1978	1977	1976	1975
Revenues	$82,803	$63,051	$45,686	$35,468	$22,563
. Percent increase from previous year	31%	38%	29%	57%	70%
Income before taxes	$21,566	$18,028	$13,268	$ 9,274	$ 4,654
. Percent increase from previous year	20%	36%	43%	99%	102%
Net income	$10,762	$ 8,599	$6,793	$ 5,247	$ 2,778
. Percent increase from previous year	25%	27%	29%	89%	65%
Per share income (A)	$ 0.90	$ 0.72	$0.58	$ 0.47	$ 0.30
. Percent increase from previous year	25%	24%	23%	57%	N/A

(A) Adjusted for two-for-one stock splits in December 1979 and December 1977.
N/A Not Available.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Revenues for the nine-month period ended September 30, 1980, were $76,044,019, an increase of 27% over revenues of $59,649,053 for the same period in 1979. INPUT estimates SMS's 1980 revenues will range between $105 and $107 million.

- At the end of 1979, SMS had 1,019 employees. SMS currently has 1,190 employees, segmented as follows:

- Sales personnel	120
- Field service representatives	240
- Field support personnel	190
- Analysts and programmers	360
- Computer operations/distribution/ microfilm services	95
- General and administrative	115
- Engineering	70
	1,190

- The primary competitor of SMS is the Health Services Division of McAUTO. Additional competition stems from in-house systems offered by IBM, NCR and Technicon Medical Information Systems, and hospital systems offered by other services firms, such as HBO and Tymshare.

KEY PRODUCTS AND SERVICES

- INPUT estimates SMS derived approximately 85% ($70.4 million) of its 1979 revenues from processing services and 15% ($12.4 million) from software and hardware leases from its distributed processing/turnkey systems.

- The company has penetrated approximately 16% of its targeted marketplace, the 3,000 non-federal, acute-care hospitals with 100 beds or more. The following five-year statistical summary represents SMS's hospital client base. These numbers have been restated from last year and do not reflect the 35 American Medicorp Hospitals, representing 7,000 beds for which SMS provides services, or long-stay hospitals and beds.

 - In 1978, Humana Corporation acquired American Medicorp Hospitals and planned to convert all hospitals to its own system. This conversion has not occurred as scheduled and SMS is still serving a number of the hospitals. Because the future of this business base is questionable, SMS excludes these hospitals from its statistics.

 - The most significant gain in SMS's client base was the tripling of COMMAND users. Since the end of 1979, COMMAND clients have continued to increase and now number approximately 340 of the 490 hospitals served, or 69%.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

SMS
STATISTICAL DATA ON CLIENT BASE
(As of December 31, 1979)

ITEM \ FISCAL YEAR	1979	1978	1977	1976	1975
Acute-care hospitals under contract*	440	390	345	294	253
Acute-care beds served	123,000	111,000	99,000	77,000	65,000
Average revenues per acute-care bed per day	$ 1.80	$ 1.58	$ 1.40	$ 1.25	$1.10
ACTION installations	101	71	41	-	-
COMMAND installations	210	70	-	-	-

* Excludes 35 American Medicorp Hospitals, representing 7,000 beds, and long-stay hospitals and beds.

- A few years ago the average-sized hospital served by SMS had 240 beds. In 1980, the average SMS client is a 300-bed hospital.

- SMS's data services are provided through contractual arrangements usually having an initial term of five years. Some contracts range from three to seven years, and no more than one-fourth of the company's contracts expire in any one year. Loss of existing clients normally runs less than 3% each year.

- Applications available to hospital clients on the SMS network service are:

 - Census and Inpatient Billing.
 - Accounts Receivable.
 - Outpatient Accounting.
 - Accounts Payable.
 - General Ledger and Financial Reporting.
 - Corporate Information System.
 - Third-Party Logs.
 - Inventory.
 - Fixed Asset Accounting.
 - Payroll.
 - Financial Patient Index.
 - Personnel Administration.

- COMMAND, an on-line patient reporting system introduced in 1978, provides clients with the capability to perform historical, financial and demographic data base functions. COMMAND, PERSONNEL and General Ledger are data base systems that permit clients to access standard reports and to design custom reports that they may need. COMMAND combines financial and clinical data to prepare reports for:

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Admitting.
- Medical Records.
- Utilization Review.
- Administration, Planning and Statistics.
- Professional Services.
- Risk Management.
- Infection Control.

- ACTION, a minicomputer-based, intrahospital communication system, was introduced in 1976 and is offered on Four Phase or DEC Systems. ACTION functions either as a standalone minicomputer or in conjuction with other products on SMS's network. It provides hospitals with the capability to handle applications within specific departmental or functional areas.

 - Application modules available include:
 - Inpatient Admitting.
 - Outpatient Registration/Point of Service Billing.
 - Nurse Station Medical Order Entry.
 - Interactive Pharmacy.
 - Radiology Indexing.
 - Patient Identification.
 - Chart Location and Delinquency System.
 - Reregistration.
 - Clinic Scheduling.
 - Laboratory and Radiology Interfacing.

 - At the end of October 1980, there were 130 users of the ACTION system. The majority of clients use ACTION in conjunction with the SMS host system. Only a small number of systems have been installed for use on a standalone basis.

 - Price of the system ranges from $1.25 to $2.00 per patient day.

- In late 1979, SMS released a new general ledger system for hospital clients. New enchancements allow for more flexibility in preparing reports and greatly improve statistical reporting capabilities.

- SMS's Physicians' Billing system, which used to be an individual application under the hospital systems, was enhanced in 1980 and is now known as Physicians' Services. Operating as a complete product line on its own, SMS is marketing the product to group practices with six physicians or more. It includes applications for financial management and patient reporting, and offers real-time communications.

 - Some of the features available to physician groups (hospital-based, university-based or unaffiliated) include:

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- On-line inquiry.
- Patient billing.
- Insurance billing proration.
- Accounts payable.
- General ledger.
- Ad hoc reporting.

- SMS has ceased the marketing and support of application services to retail pharmacies.

INDUSTRY MARKETS One hundred percent of SMS's revenues are derived from the medical industry, primarily from hospitals.

GEOGRAPHIC MARKETS

- SMS's clients are located in 42 states and the District of Columbia. Highest concentration of clients is in the Western and Eastern regions.

- The company maintains 23 branch offices.

COMPUTER HARDWARE

- SMS opened an 82,000 square-foot data center in October 1979. Equipment at the center consists of two IBM 370/168-APs and two IBM 3033s.

- Clients can access the network either through more than 140,000 miles of private leased lines or by satellite.

© 1980 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

RCS Revenues '79 - $80 mill for Gold

Scott Holmes

COMPANY HIGHLIGHT

SHARED MEDICAL SYSTEMS
650 Park Avenue
King of Prussia, PA 19406
(215) 265-7600

R. James Macaleer, President and Chairman
Public Corporation, OTC
Total Employees: 1,000
Total Revenues, Fiscal Year End 12/78: $63,052,000

THE COMPANY

- Shared Medical Systems (SMS) was formed in 1969 by R. James Macaleer, Harvey J. Wilson and Clyde Hyde to provide computer services to the hospital industry. The three founders were former IBM marketing representatives engaged in selling in-house systems to hospitals. In June 1976 SMS became a publicly held corporation.

- SMS is the largest computer services vendor in the hospital industry. Both network and minicomputer based services are provided. Processing services to physicians and retail pharmacies are also offered through the SMS network.

- SMS's 1978 revenues were $63,052,000, a 38% increase over 1977 revenues of $45,606,000. The company has experienced an AAGR of 48% over the past five years. Net income in 1978 was $8,599,000, a 26% gain over $6,793,000 in 1977. A five year financial summary follows:

SHARED MEDICAL SYSTEMS
FIVE YEAR FINANCIAL SUMMARY
($ Thousands, Except Per Share Data)

FISCAL YEAR / ITEM	1978	1977	1976	1975	1974
Revenues	$63,052	$45,686	$35,468	$22,563	$13,248
. Percent increase from previous year	38%	29%	57%	70%	N/A
Income before taxes	$18,028	$13,268	$ 9,274	$ 4,654	$ 2,301
. Percent increase from previous year	36%	43%	99%	102%	N/A
Net income	$ 8,599	$ 6,793	$ 5,247	$ 2,778	$ 1,684
. Percent increase from previous year	26%	29%	89%	65%	N/A
Per share income (A)	$ 1.44	$ 1.15	$ 0.95	$ 0.60	$ 0.37
. Percent increase from previous year	25%	21%	58%	62%	N/A

(A) Adjusted for two-for-one stock split in December 1977.
N/A Not Available.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Revenues for the nine month period ended September 30, 1979 were $59,649,053, an increase of 32% over revenues of $45,295,516 for the same period in 1978. INPUT estimates SMS's 1979 revenues will approach $82 million.

- In 1979 SMS investigated opportunities for offering a disaster recovery service. Initially called the Shared Standby System, marketing efforts for the service have since been dropped. Competition from other vendors and uncertainty of its profitability were the deciding factors in discontinuing the service.

- SMS's growth has primarily resulted from internal development of new applications and adding new hospitals to its client base with one exception. Hospital Computer Center, Inc. (HCC), was acquired by SMS in October 1975. SMS subsequently converted the majority of the HCC clients to the SMS system and closed all of the HCC data centers and sales offices. Approximately 14,000 beds (67 hospitals) were added to SMS's client base by the acquisition of HCC.

- At the end of 1978 SMS had 813 employees. SMS currently has 1,000 employees, divided as follows:

- Sales personnel	100
- Field service representatives	200
- Field support personnel	150
- Analysts and programmers	300
- Computer operations/distribution/microfilm	80
- General and administrative	100
- Engineering	50
	1,000

- The primary competitor of SMS is the Health Services Division of MCAUTO. Additional competition stems from in-house systems offered by IBM, NCR, and Technicon Medical Information Systems, and hospital systems offered by other services firms, such as HBO and Tymshare.

KEY PRODUCTS AND SERVICES

- The majority of SMS revenues are derived from processing services. Sales from turnkey systems are generally integrated with processing services and probably represent no more than 15% of total revenues.

- The company has penetrated approximately 16% of its targeted marketplace, the 3,000 non-federal acute-care hospitals which have 100 beds or more. Hospitals under contract to use SMS services currently number 470 and represent a total of 127,000 beds.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- SMS's data services are provided through contractual arrangements usually having an initial term of three years. Some contracts range from one to five years, and no more than one-third of the company's contracts expire in any one year. Loss of existing clients normally runs less than 3% each year.

- Applications available to hospital clients on the SMS network service are grouped as follows:

 - Financial Management Systems:
 - Census and Inpatient Billing.
 - Accounts Receivable.
 - Outpatient Accounting.
 - Physician's Billing.
 - Accounts Payable.
 - General Ledger and Financial Reporting.
 - Corporate Information System.
 - Third Party Logs.
 - Resource Management Systems:
 - Inventory.
 - Fixed Asset Accounting.
 - Payroll.
 - Financial Patient Index.
 - Personnel Administration.
 - COMMAND, an on-line patient reporting system introduced in 1978, provides clients with a capability to perform historical, financial and demographic data base functions. Integrated with some of the Financial Management System applications, COMMAND combines financial and clinical data to prepare reports for:
 - Admitting.
 - Medical Records.
 - Utilization Review.
 - Administration, Planning and Statistics.
 - Professional Services.
 - Risk Management.
 - Infection Control.

- ACTION, a minicomputer based intra-hospital communication system, was introduced in 1976 and is offered on Four Phase 470/490 or a DEC 11/70 system. ACTION functions either as a standalone minicomputer or in conjunction with other products on SMS's network. It provides hospitals with a capability for handling applications within specific departments or functional areas.

 - The ACTION system is offered in four modules:
 - ACTION 200 is a low-level entry module used for patient registration.
 - ACTION 400 and 600 provide data collection applications for
 - Inpatient Admitting.
 - Outpatient Registration/Point of Service Billing.
 - Nurse Station Medical Order Entry.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

 - Interactive Pharmacy.
 - Registration.
- ACTION 1100 is a complete support system which provides applications for the following hospital departments:
 - Interactive Pharmacy.
 - Radiology Indexing.
 - Patient Identification.
 - Chart Location and Delinquency System.
 - Reregistration.
 - Clinic Scheduling.
 - Ancillary Scheduling.
 - Laboratory and Radiology Interfacing.
- There are currently 100 users of the ACTION system. The majority of clients use ACTION in conjunction with the SMS host system. Only a small number of systems have been installed for use on a standalone basis.
- Price of the system ranges from $1.25 to $1.75 per patient day.

- The following five year summary presents the growth of SMS's client base:

SMS
STATISTICAL DATA ON CLIENT BASE
(As of December 31, 1978)

ITEM \ FISCAL YEAR	1978	1977	1976	1975	1974
Acute-care hospitals under contract	436	392	329	288	172
Acute-care beds served	120,000	108,000	84,000	72,000	46,000
Average revenues per acute-care bed per day	$ 1.58	$ 1.40	$ 1.25	$ 1.10	N/A
ACTION installations	80	40	-	-	-
COMMAND installations	70	-	-	-	-

- In 1978 SMS began marketing applications to physicians through its network service. Physician groups targeted are large medical clinics and groups associated with hospitals. Applications include:

 - Patient Registration.
 - Patient Billing.
 - Receivables Management.
 - On-line Patient Identification.
 - On-line A/R Inquiry.
 - Chart Location and Delinquency.
 - On-line Patient Data Base Reporting (access to COMMAND).
 - Accounts Payable.
 - General Ledger.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- A retail pharmacy system (designed for billing and inventory applications) and computer output microfilm services are also available through the SMS network.

INDUSTRY MARKETS Approximately 100% of SMS revenues are derived from the medical industry, primarily hospitals.

GEOGRAPHIC MARKETS

- SMS clients are located in 42 states and the District of Columbia. Highest concentration of clients are in the Western and Eastern regions.
- The company maintains twenty-four branch offices.

COMPUTER HARDWARE

- SMS's data center is at its headquarters' location. Equipment at the center consists of two IBM 370/168's and an IBM 3033.
- Clients can access the network through more than 125,000 miles of private leased lines or by satellite.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

COMPANY SHARED MEDICAL

FY 12/31

FISCAL YEAR	ANNUAL REVENUE ($millions)	ANNUAL GROWTH RATE (%)	COMMENTS
1971	$4		
		50	
1972	6		
		67	
1973	10		
		30	
1974	13		
		77	
1975	23		
		60	
1976	37		
		35	
1977	50		
		53 %	Previous years Average
1978	65	30 %	1977-1978
		25 %	Max Rate Projected
		20 %	Min Rate Projected

	Max Revenue	Min Revenue	Avg. Revenue
1979	81	78	80
1980	102	94	98
1981	127	112	120
1982	159	135	147
1983	198	162	180

	COMPANY	TOTAL REVENUES - YEAR END 1978	1977	1976	1975	ACQUISITION INFORMATION: Acquired Company	Place	Date	Rev.
13.	R&R 9/30	6mos-66.58	113.82	94.87	82.44				
	Approx EDP	6mos 33.08	58.00	36.00	29.00				
14.	Shared Medical Systems 12/31		45.69	35.47	22.56	Hosp Cptr Ctr.		10/75	4.1m
15.	Tymshare 12/31	584 acq customers many disp.	101.17	81.84	64.41	tried to acquire Quotex 1975			
			2m - 75 Rep 3m - 75 9m to 12/31/76	privt purch	± 1.5m	Icasco Response TS	NY	12/75	
				pool		Quotex Data Sys.	Woodridge CA	12/75	repair/refurb eqt
		4.2m	1m ± 581,900	pool		Quotex	Anaheim	8/76	tax returns
		75-3.1m ±		perkins		Medical Data Sys.	Mahwah NJ	6/76	med-fac: clinics
			.202m	purch		Weitan 29	SF	6/76	transf indust
	600 emp.	$ 10m or	3.6m	purch	4377 cents to	UDSBA	SF	10/77	6.1m
		2man	5 mo to 12/31/75 785,200	pool	from 6m -	Simplified DP		10/1976	fuel oil
			35-4m	not dec	acq 8.25m	Medcab Info Sys	Dallas	1978	
	I6 mos - dec rumor.					? Carter Associates	CA	late 78?	
			3.5-4m	not dec.		Auto Tour (from The Tonicans about 5 others)		1978	tax
			12/74 13.5m	pool		United Data Centr		12/74	

Company	Total Revenues - Fiscal Year End 1978	1977	1976	1975	Acquisition (Information) Acquired Company	Place	Date	Rev.
Allcomp 6/30	22.0	16.18	12.85	8.92	Electronic Data Rep. Computer Mgt Inc Micrographic Cptr Svcs EDP of Indiana Computer Micro Svcs Micrographix Data Svcs. unsuccessfully attempted to buy Computer Usage Corp, Midwest Advanced Cptr Svcs.	FLA. Cleveland Ohio Indiana	1975 1977 1975 1973 1974 1973	banking software ± 3m (3/78)
2. ADP 6/30	3/31-9mos 217.37	245.49	199.24		CPI, Inc cptr ctrs in: Denver, Tulsa & Clifton NJ cptr ctrs: London, Seattle tried to acq Autex	Bryant Bank CA OK NJ	1976 2/77 3/77 5/77	acctg/recordkeeping
3. CSC 4/1	276.91	234.75	219.91	177.35	Paid Prescriptions	~~PA~~ NJ	1977	
Addendum- Shared Medical 3/31/78- 14.07								

FINANCIAL UPDATE TO PROFILE DATED MAY 1984

I. P. SHARP ASSOCIATES
2 First Canadian Place
Suite 1900
Toronto, Ontario M5X 1E3
(416) 364-5361

I. P. Sharp, Chairman
William E. Thomson, President
Private Corporation
Total Employees: 550
Total Revenue, Fiscal Year End
12/31/84: $50,230,000 (Canadian)

I. P. SHARP ASSOCIATES
FIVE-YEAR FINANCIAL SUMMARY
($ Canadian, thousands)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	$50,230	$47,503	$51,607	$42,031	$36,000
. Percent increase from previous year	6%	(8%)	23%	17%	44%

- I. P. Sharp management attributes revenue growth to an increase in sales of large multinational systems. Areas of major growth include banking products, investment products, SHARP APL, PROMIS (the semiconductor process management package), and data base services.

- I. P. Sharp management projects 1985 revenue will reach $51.5 million (Canadian).

SOURCE OF REVENUE

- I. P. Sharp Associates derived approximately 65% of 1984 revenue from processing services, 30% from software sales, and the remaining 5% from professional services.

 - The APL Division accounts for approximately 85% of total revenue. The APL Division provides timesharing and data base services, APL software, and consulting.

 - The Special System Division contributes the remaining 15% of revenue. The Special Systems Division provides packaged software for computer-aided manufacturing and public safety.

©1985 by INPUT. Reproduction Prohibited.

- I.P. Sharp derives its revenue from the following industries:

Government	14%
Manufacturing	12
Banking and finance	11
Oil and gas	8
Securities	7
Paper and publishing	5
Other	43
	100%

NEW PRODUCTS AND SERVICES

- The SHARP APL interactive programming language is now available on the IBM Personal Computer (PC-XT to PC 370) and compatibles, as well as IBM 370s.

- IPSANET, I.P. Sharp's private packet-switched network, now interfaces with Telepac in addition to Telenet, Tymnet, Datapac, Datex-P, PSS, and Tranpac.

 - Recent additions to the SHARP APL network include:

 . VIEWPOINT, a generalized data base creation, query, and reporting system, was introduced in April 1984. VIEWPOINT provides a fourth generation language reporting facility, as well as an interface to operating system data sets.

 - VIEWPOINT is available on a timesharing basis or installed on the user's computer running SHARP APL. The perpetual license fee is $37,500 with a $5,625 annual maintenance fee, or a $1,500 monthly license fee that includes maintenance.

 . CompuTrac, introduced in late 1984, was developed in conjunction with Technical Analysis Group (New Orleans, LA). CompuTrac permits technical analysts to follow stock market trends and patterns using a variety of studies and charting techniques.

 - CompuTrac is available on a timesharing basis and requires SHARP APL software installed on IBM Personal Computers, compatibles, or Apple II computers. The hourly fee for CompuTrac usage is $5. The personal computer software is priced at $100.

 . The Electronic Conferencing System, introduced in early 1985, provides a facility for international communication, as well as storage and retrieval of messages.

©1985 by INPUT. Reproduction Prohibited.

- The Electronic Conferencing System may be used on a timesharing basis or installed on users' computers running SHARP APL. The perpetual license fee for the system is $40,000 with a $6,000 annual maintenance fee, or a $1,600 monthly license fee that includes maintenance.

. In September 1985 I. P. Sharp introduced the World Trade Center Network System, which was developed in conjunction with the World Trade Center Association. The system consists of a trade data base and inquiry system for the exclusive use of the World Trade Center Association, its affiliates, and local members worldwide.

- Users may access the data base through IPSANET on a timesharing basis.

. Securities Clearing and Information Control (SCIC) was also introduced in the third quarter of 1985. SCIC provides a system for tracking local and international trading of securities.

- The system is available on a timesharing basis.

- In December 1985 I.P. Sharp will release GLCS/Link, an option for the Global Limits Control System. GLCS/Link will link the Global Limits Control System to a bank's back office system.

• The Special Systems Division currently has approximately 20 installations of the Process Management and Information System (PROMIS). PROMIS was developed for semiconductor processing facilities.

- PROMIS provides work in process tracking, production planning and costing, production reporting, engineering data analysis, automated equipment interface, and automated facilities monitoring.

©1985 by INPUT. Reproduction Prohibited.

I. P. SHARP ASSOCIATES
2 First Canadian Place
Suite 1900
Toronto, Ontario, M5X 1E3
(416) 364-5361

I. P. Sharp, President
Private Corporation
Total Employees: 540
Total Revenue, Fiscal Year End
12/31/83: $39,300,000 (U.S.)
$47,503,000 (Canadian)

THE COMPANY

- In 1964 I. P. Sharp Associates, an employee-owned company, began designing and implementing software systems. In 1969 Sharp Associates began offering APL timesharing services via SHARP APL. These interactive computer services continue via I. P. Sharp's own network IPSANET. In addition to timesharing, I. P. Sharp now offers software packages, data base inquiry services, and professional services.

- Sharp's 1983 revenue declined from $51,607,000 to $47,503,000, an 8% change. A five-year financial summary follows:

I. P. SHARP ASSOCIATES
FIVE-YEAR FINANCIAL SUMMARY
($ Canadian, thousands)

ITEM \ FISCAL YEAR	1983	1982	1981	1980	1979
Revenue	$ 47,503	$ 51,607	$ 42,031	$ 36,000	$ 25,000
. Percent increase from previous year	(8%)	23%	17%	44%	32%

 - Sharp's management attributes its loss of revenue in part to a recessionary business climate. In addition, however, Sharp's timesharing business has been eroded by an upsurge in the use of personal computers.

 . Sharp's marketing strategy intends to address the timesharing decline by targeting specific industry applications that require not only particular software but also an international network.

 - Management expects revenue to reach $55 million (Canadian) in 1984.

- I. P. Sharp Associates is divided into two divisions: Special Systems and APL.

© 1984 by INPUT. Reproduction Prohibited.

- The APL Division consists of APL software sales, timesharing, and data base operations. In addition, Sharp provides professional services (in the form of custom programming in APL) as a part of this division.

- The Special Systems Division develops standard software packages.

- In April 1984 I. P. Sharp Associates will introduce a prototype fourth-generation data base management and report-generating system called Viewpoint.

 - Written in APL, Viewpoint will compete with Information Builders' FOCUS.

- The 540 Sharp employees are segmented as follows:

Marketing/sales	100
Software services/customer support	300
Computer operations	40
General and administrative	100
	540

- Sharp competes with STSC (acquired by Continental Telephone) for APL timesharing services, with Automatic Data Processing and GEISCO for other timesharing services, and with Data Resources, Inc. and Chase Econometrics/Interactive Data Corporation for data base inquiry business. Competition for its software stems from GEISCO, IBM, SAS Institute, Execucom, Mathematica, and Information Builders.

KEY PRODUCTS AND SERVICES

- The APL Division of I. P. Sharp Associates accounts for approximately 90% of the company's revenue. By service type, timesharing and data base services account for 73%; APL software sales for 12%; and consulting for 5%. The Special Systems Division contributes the remaining 10% of Sharp revenue.

- The SHARP APL remote computing service was established in 1969. In 1976 the company installed its own private packet-switched network, IPSANET, which is interfaced to Telenet, Tymnet, Datapac, Datex-P, PSS, and Tranpac.

 - Applications available using the network are outlined in the exhibit and include financial planning and consolidation, human resource and project management, business graphics, forecasting, data base management, and electronic mail.

 - Currently, approximately 12% of I. P. Sharp revenue is derived from the lease or purchase of APL applications software run on its network. In addition, a client's computer center can be attached to the I.P. Sharp network, providing worldwide communications.

© 1984 by INPUT. Reproduction Prohibited.

- Recent software additions to the Sharp APL network include:

 . Microcomm. Introduced in January 1983, Microcomm makes Sharp's data bases available in VisiCalc format on the IBM PC. Users can downline load numeric and textual data to diskette in VisiCalc format and then it can be transferred onto the VisiCalc worksheet and manipulated with standard VisiCalc commands.

 . Global Limits Control System. This system, introduced in March 1983, has two main parts that provide banks with a tool to implement a real-time exposure control system. The first is the central data base, which houses all information on a user bank's limits. The second is the record of actual transactions completed by the user bank worldwide.

 - This package may be leased for IBM equipment on a perpetual basis ($40,000 installation fee, $300,000 perpetual license fee, and $40,000 per year maintenance) or on a monthly basis ($40,000 installation fee and $12,000 per month). Banks may instead elect to use it on a timesharing basis.

 . FASTNET. A computerized project planning system based on network analysis and critical path techniques, FASTNET uses Critical Path Analysis (CPA), a method of representing the planning details of a project using a network diagram. Small networks of up to a few hundred activities are the most effective application areas for FASTNET.

 - FASTNET may be used on a timesharing basis or installed on the user's computer. In-house installation charges for sites running SHARP APL are a $15,000 perpetual license fee and a $2,200 annual maintenance fee, or a $600 monthly license fee that includes maintenance.

 . Quick Draw. This production plotting package was introduced in May 1983 and produces full-color business graphs and charts on Hewlett-Packard 7221 series plotters. Quick Draw is suited to companies that require a large number of specialized plots on a regular basis.

 - Quick Draw is also available through a timesharing arrangement or for installation in-house on IBM 370-compatible computers running SHARP APL for a perpetual license fee of $10,000 and $1,500 annual maintenance, or at a monthly license fee of $400.

 . SIFT (Sharp Interactive Forecasting Techniques). With SIFT, a range of time series analysis techniques for producing forecasts are possible. Analysis techniques include moving averages,

© 1984 by INPUT. Reproduction Prohibited.

exponential smoothing, curve fitting, decomposition techniques, harmonic smoothing, trend cycle analysis, and generalized adaptive filtering.

- Users of a perpetual license pay $20,000 and an annual maintenance fee of $3,000. Otherwise, a monthly license fee is $800.

- Over 100 data bases in the areas of banking securities, finance, economics, energy, and aviation can be accessed by users of Sharp's remote computing services. A complete list of available Sharp data bases can be found in the exhibit.

- In cooperation with the Institute of International Finance, I. P. Sharp developed the IIF Country Evaluation system in 1983.

 - The IIF Country Evaluation System is a worldwide information system for the member banks of the Institute of International Finance. Through the I. P. Sharp global communications network, the system provides member banks with access to financial and economic data on many developing countries.

 - The IIF Country Evaluation System data base contains approximately 80 line items. These are arranged into the five groupings of Budget, Claims of Local Monetary Sector, Economy, Balance of Payments, and External Debt. Items show annual data for the past 10 years with projections and estimates for the current year. There is no monthly minimum or initiation fee to use the system.

- Approximately 5% of Sharp's revenue stems from consulting associated with its APL Division. Sharp consultants provide contract APL programming to customize software available for sale.

- Approximately 10% of I. P. Sharp Associates' revenue is derived from the Special Systems Division that develops and markets software. There are two main groups within the Special Systems Division - the computer-aided manufacturing group and the public safety group.

 - Computer-aided manufacturing - develops and markets a software package for the process management of semiconductors called PROMIS. The package costs between $200,000 and $400,000, depending on customization. There are currently 13 installations.

 - Public safety - packages for police, fire, and ambulance dispatch information are developed and marketed through this group. The packages cost between $200,000 and $400,000, depending on customization.

© 1984 by INPUT. Reproduction Prohibited.

EXHIBIT

I.P. SHARP NETWORK PROFILE

APPLICATION AREA/PRODUCT NAME

- Operating Systems(s)
 - AMDAHL 470/V8, IBM 3081, MVS, IBM 370/158 AP
- Programming Languages Supported
 - APL
- Data Management Software
 - STARS (Modeling)
 - MABRA (Record Administration)
 - MAGIC (Data Base Retrieval)
 - MAGIC STORE (Multi-Dimensional Time Series Data Management)
- Data Bases Available
 - AVIATION (Association of European Airlines, Aircraft Accident Data Base, Commuter Online Origin-Destination, Canadian Operating Statistics, ER586 Service Segment, FORM 41, IATA-North Atlantic Traffic, ICAO Traffic Statistics, U.S. International Air Travel Statistics, Official Airline Guide, Origin-Destination, Air Charter), Combined T9/Service Segment
 - ECONOMICS (Australian Bureau of Statistics, Australian Export Statistics; Australian Economic Statistics; Canadian 1981 Agricultural Census; Business International Historical Data; Business International Economic Forecasts; Business International Historical Data; Bank for International Settlement; Quarterly, Bank for International Settlement; Semi-Annual, German Bundesbank Data Base; CANSIM Mini Base and Supplement; 1981 Canadian Census; Citibase; Citibank Economic Forecast; Australian Sector Cash Flow; International Financial Statistics; Australian Input-Output Data; National Income Forecasting Model of the Australian Economy; National Planning Association Demographic Data; National Planning Association Economic Data; Organization for Economic Cooperation and Development; United Nations Commodity Trade Statistics; S.J. Rundt World Risk Analysis Package, German Statistical Data; United Kingdom Central Statistical Office; United States Consumer Price Index; United States Flow of Funds, Quarterly; United States Producer Price Index; World Bank Debt Tables)
 - ENERGY (Australian Major Energy Statistics, Monthly Report of Heating Oil and Other Middle Distillate Sales by State, Dewitt Petrochemical Newsletters and Price Forecasts, Electric Utilities, Weekly Temperatures, Petroleum Argus Daily Market Report, Petroleum Argus Prices, Hughes Rotary Rig Report, Independent Chemical Information Services, United States Petroleum Imports, International Petroleum Annual, Canadian Retail Gas Volume, Liquefied Petroleum Gas Report, Monthly Energy Review, Petroleum Intelligence Weekly, Lundberg Survey Share of Market, Quarterly Oil Statistics, State Energy Data System, United States Department of Energy, Lundberg Survey of Wholesale Prices, Weekly Statistical Bulletin)

APPLICATION AREA/PRODUCT NAME

 - FINANCE (Australian Commodities, Agricultural Commodities, Australian Graduate School of Management Corporate Data, Australian Financial Markets, Australian Stock Exchanges Indices, Canadian Bonds, Canadian Stock Options, Canadian Department of Insurance Property and Casualty Insurance, Australian Financial Data Base, Australian Funds Markets, Commonwealth Bank Bond Index, Commodities, Currency Exchange Rates, Disclosure II, Canadian Department of Insurance, Financial Post Canadian Corporate Data, Financial Post Securities, Federal Reserve Board Weekly, Financial Times Actuaries Share Indices, Financial Times Share Information, Fund Monitor Unit Trusts and Insurance Bonds, Hong Kong Stock Exchange, Chartered Banks Monthly Statement of Assets and Liabilities, Canadian Chartered Banks Monthly, Money Market Rates, North American Stock Market, The Chartered Banks Quarterly Income Statement, Canadian Chartered Banks Quarterly, Singapore Corporate Statistics, Singapore Stock Exchange, Sydney Stock Exchange STATEX Service, Sydney Stock Exchange Share Prices, Toronto Stock Exchange 300 Index and Stock Statistics, United States Bonds, United States Stock Options, United States Quarterly Financial Report, United States Stock Market, Bank of Canada Weekly Financial Statistics, Canadian Chartered Banks Yearly, Canadian Chartered Banks Annual)
 - OTHER (Actuarial Data Base, APL Bibliography, National Emergency Equipment Locator System)
- Business/Financial Applications SIFT (Forecasting)
 - CAPERS (Capital Expenditure)
 - CONSOL (Business Reporter)
 - LESSOR (Lease Evaluation)
 - FINANCIAL ANALYSIS
 - GLOBAL LIMITS CONTROL SYSTEM
- Graphics
 - SAGA (Graphic Aids)
 - SUPERPLOT (Business Graphics)
 - QUICKDRAW (Production-Oriented Graphics)
- Scientific/Statistical
 - XTABS (Cross-Tabulation Analysis)
 - Statistical Analysis
 - BOX-JENKINS (Time Series Analysis and Forecasting)
 - EASY (Econometric Analysis)
- Other Key Products
 - ACTPAK (Actuarial)
 - MAILBOX (Electronic Mail)
 - X-11 (Seasonal Adjustment)
 - SNAP (Network Analysis)
 - WSDOC (Workspaces)
 - FASTNET (Project Planning)

© 1984 by INPUT. Reproduction Prohibited.

INDUSTRY MARKETS

- Sharp estimates its industry segment revenue as follows:

-	Discrete manufacturing	20%
-	Transportation	15
-	Banking and finance	20
-	Insurance	15
-	Education	10
-	Government	5
-	Services	15
		100%

GEOGRAPHIC MARKETS

- The company's 1983 revenue was derived from the following geographic markets:

Canada	32%
Europe	28
U.S.	32
Australia	5
Asia	3
	100%

- Sharp Associates maintains offices in 22 countries and the SHARP APL Network can be accessed from approximately 600 cities worldwide.

 - In 1981 Sharp opened offices in Hong Kong and Singapore and later that year entered into a joint venture with Singapore Airlines for the marketing of timesharing services in 10 other Asian countries. In May 1982 the company announced that INTEC, Inc. of Toyama would represent Sharp in Japan.

 - Also in 1982, Sharp signed an agreement with the Daewoo Corporation for the marketing of SHARP APL products and services in the Republic of Korea.

COMPUTER HARDWARE AND SOFTWARE

- I. P. Sharp maintains the following equipment at its Toronto data center.

 - 1 IBM 3081K running under MVS.
 - 1 IBM 370/158AP running under MVS.
 - 1 Amdahl 470/V8 running under MVS.

- One hundred seventy-seven Computer Automation LSI 2/20 concentrators serve as network nodes worldwide.

© 1984 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

I.P. SHARP ASSOCIATES LIMITED
2 First Canadian Place
Suite 1900
Toronto, Ontario M5X 1E3
(416) 364-5361

Ian P. Sharp, President
Private Corporation
Total Employees: 535
Total Revenue, Fiscal Year End
12/31/81: $42,031,000 (Canadian)
$35,000,000 (U.S.)

THE COMPANY

- I.P. Sharp Associates was formed in 1964 as a software firm by Ian Sharp and seven colleagues. The company pioneered with commercial APL timesharing services in 1969, and is now a major international supplier. Sharp, with a customer base of over 600, also provides professional services and markets software products.

- Sharp's 1981 revenue reached $42 million, a 17% increase over 1980 revenue of $36 million. Net income was $3 million in 1981, as compared to $3.7 million in 1980. A five-year financial summary follows:

I.P. SHARP ASSOCIATES
FIVE-YEAR FINANCIAL SUMMARY
($ Canadian, thousands)

ITEM \ FISCAL YEAR	1981	1980	1979	1978	1977
Revenue	$42,031	$36,000	$25,000	$19,000	$14,000
. Percent increase from previous year	17%	44%	32%	36%	40%
Net income	$ 3,030	$ 3,700	$ 1,400	$ 1,200	$ 1,100
. Percent increase (decrease) from previous year	(18%)	164%	17%	9%	214%

- Net income decreased in 1981 due to costs associated with network expansion to the Far East.

- Sharp management projects 1982 revenue will reach over $50 million.

©1982 by INPUT. Reproduction Prohibited.

- I.P. Sharp has wholly owned subsidiaries in Australia, Austria, Belgium, Denmark, France, Hong Kong, Ireland, Italy, The Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, the United States, the United Kingdom, and West Germany.

- I.P. Sharp has four major divisions headquartered in Toronto.

 - The Special Systems Division provides professional services and markets some of the systems it designs as software products. Special Systems branch locations include Ottawa, Rochester (NY), Amsterdam, and London.

 - The Computer Systems Division operates the SHARP APL timesharing service.

 - The Applications Software Division is responsible for the development and maintenance of Sharp's APL network software.

 - The Data Base Services Division maintains and updates data bases available on Sharp's network.

- In November 1981, I.P. Sharp entered into a joint venture agreement with Singapore Airlines for the marketing of timesharing services and software products in Southeast Asia. A new corporation, Singapore International Software Services (SISS), was formed. SISS is 51% owned by Singapore Airlines and 49% by Sharp.

 - The joint venture follows Sharp's network expansion to the Far East in May 1981 with local access in Singapore and Hong Kong. Sharp management expects the Far Eastern market to add about 25% to the company's export business by 1984.

- I.P. Sharp's 535 employees are segmented approximately as follows:

- Marketing/sales	115
- Software services/customer support	260
- Computer operations	75
- General and administrative	85
	535

- STSC, Inc. is Sharp's major competitor for APL timesharing services. Other remote computing services competitors include Automatic Data Processing, Inc. and GEISCO. Sharp competes with Data Resources, Inc. and Chase Econometrics/Interactive Data Corporation in offering data base services.

©1982 by INPUT. Reproduction Prohibited.

KEY PRODUCTS AND SERVICES

- Approximately 70% of Sharp's 1981 revenue was derived from processing services, 20% from professional services, and 10% from software product sales.

- I.P. Sharp provides interactive APL remote computing and inquiry/response services worldwide. Applications available on the network are outlined in the exhibit, and include financial planning and consolidation, human resource and project management, business graphics, forecasting, and data base management.

- The company has been providing on-line public data bases since 1970, and now offers more than 60 concentrated in five subject areas: aviation, economics, energy, finance, and actuarial. The data bases contain over 25 million time series of data, and almost all are available with no subscription fee or minimum monthly charge.

 - Major data bases added to the network during the past year include the following:

 . The National Planning Association Economic Data Base became available on Sharp's network in February 1981. The data base contains over 180,000 yearly time series of U.S. economic data broken down by county, state, region, Bureau of Economic Analysis Area, and Standard Metropolitan Statistical Area. Each area has 50 accounts covering employment, income, earnings, and population. The data base contains historical data from 1967 and projections to 1990, soon to be extended to the year 2000.

 . Business International Corporation's BI/DATA, made available in November 1981, is a historical data base of economic and demographic data collected since 1960 for more than 130 countries. BI/DATA covers such areas as national income, gross domestic product, private consumption expenditures, currency and balance of payments, price trends, and foreign trade.

 . The OECD data base, which provides domestic economic data for its 25 member countries, became available on Sharp's network in November 1981. Main economic indicators covered include industrial production, deliveries, stocks and orders, construction, internal trade, labor, wages, and prices. Quarterly national accounts cover domestic production, capital formation, and private consumption. Annual national accounts include government and private expenditures, exports of goods and services, indirect taxes, savings, and national income.

 . Citibank's CITIBASE U.S. economic data base, made available in January 1982, covers over 4,500 statistics from more than 100 government and private sources dating back to 1947. Informa-

©1982 by INPUT. Reproduction Prohibited.

EXHIBIT

I. P. SHARP NETWORK PROFILE

APPLICATION AREA/PRODUCT NAME

- Operating System(s)
 - AMDAHL 470/V8, IBM 3081, MVS
- Programming Languages Supported
 - APL
- Data Management Software
 - STARS (Modeling)
 - MABRA (Record Keeping)
 - MAGIC (Data Base Retrieval)
- Data Bases Available
 - AVIATION (Association of European Airlines, Aircraft Accident Data Base, Commuter Online Origin-Destination, Canadian Operating Statistics, ER586 Service Segment, FORM 41, IATA-North Atlantic Traffic, ICAO Traffic Statistics, U.S. International Air Travel Statistics, Official Airline Guide, Origin-Destination, Air Charter)
 - ECONOMICS (Australian Bureau of Statistics, Australian Economic Statistics, Business International Historical Data, Business International Economic Forecasts, CANSIM Mini Base and Supplement, Citibase, Australian Sector Cash Flow, International Financial Statistics, Australian Input-Output Data, National Planning Association Demographic Data, Organization for Economic Cooperation and Development, United Kingdom Central Statistical Office, United States Consumer Price Index, United States Producer Price Index, World Bank Debt Tables, National Planning Association Economic Data)
 - ENERGY (Petroleum Argus Daily Market Report, Petroleum Argus Prices, Heavy Fuel Oils, United States Petroleum Imports, International Petroleum Annual, Liquefied Petroleum Gas Report, Monthly Energy Review, Monthly Petroleum Statistics Report, Monthly Petroleum Statement, Quarterly Oil Statistics, Monthly Supply and Disposition Report, State Energy Data System, United Kingdom Energy Trends, Weekly Statistical Bulletin)

APPLICATION AREA/PRODUCT NAME

 - FINANCE (Agricultural Commodities, Australian Bank Bill Rates, Australian Stock Exchanges Indices, Australian Commodities, Canadian Bonds, Canadian Stock Options, Australian Financial Data Base, Australian Funds Markets, Commonwealth Bank Bond Index, Commodities (London, New York, Chicago), Currency Exchange Rates, Canadian Department of Insurance, Financial Post Canadian Corporate Data, Financial Post Securities, Fund Monitor Unit Trusts and Insurance Bonds, Chartered Banks Monthly Statement of Assets and Liabilities, Canadian Chartered Banks Monthly, Money Market Rates, North American Stock Market, The Chartered Banks Quarterly Income Statement, Canadian Chartered Banks Quarterly, Sydney Stock Exchange Statex Service, Sydney Stock Exchange Share Prices, Toronto Stock Exchange 300 Index and Stock Statistics, United States Stock Options, Bank of Canada Weekly Financial Statistics, Canadian Chartered Banks Yearly)
 - OTHER (Actuarial Data Base, APL Bibliography, National Emergency Equipment Locator System)
- Business/Financial Applications
 - CAPERS (Capital Expenditure)
 - CONSOL (Multinational Consolidations)
 - Lease Evaluation
- Graphics
 - SAGA (Graphic Aids)
 - SUPERPLOT
- Scientific/Statistical
 - XTABS (Survey Analysis)
 - Linear Programming
 - Statistical Analysis
 - Box-Jenkins
 - EASY (Econometric Analysis)
- Other Key Products
 - ACTPAK (Actuarial)
 - MAILBOX
 - X-11 (Seasonal Adjustment)
 - SNAP (Network Analysis)
 - WSDOC (Workspaces)

©1982 by INPUT. Reproduction Prohibited.

tion is updated daily and covers gross national product, business cycle indicators, bank assets and reserves, credit and interest rates, industrial production, price indices, construction and housing starts, employment and unemployment, and average earnings.

- The Special Systems Division, formed in 1973 to consolidate Sharp's professional services activities, generated approximately 20% of 1981 revenue. The division specializes in providing consulting services for the specification and implementation of mini and microcomputer turnkey systems for process control, telecommunications, research, and business accounting applications. Other areas of expertise include systems design; project and facilities management; feasibility studies; contract programming; minicomputer hardware evaluation, selection, and acquisition; and the design and selection of communications facilities.

 - Examples of systems developed include:

 . International airport control systems.

 . Dual-redundant plant and process monitoring/control systems.

 . Microfilm retrieval systems for banks and police departments.

 . Mass spectrometer control systems.

 . Research and development projects for radar signal processing, secure language processors, operating systems security, and data base management systems for the Canadian and U.S. Defense departments.

 . An on-line order entry system for a national wholesale milk distributor.

 . Nationwide stock broker trading and information systems.

 - Recent contract examples include:

 . In June 1980, Sharp was awarded a $500,000 contract by General Electric's Solid State Applications Operation (Syracuse, NY) to develop PROMIS, a process management and information system for custom integrated circuit development and fabrication. The system improves process yields, reduces throughput time, and assists in the automation of semiconductor wafer fabrication by allowing management to analyze process, facility, and equipment performance and yield trends. The system runs on DEC VAX minicomputers and was installed at General Electric facilities in March 1981. Special Systems markets PROMIS as a software package for a license fee of $200,000.

©1982 by INPUT. Reproduction Prohibited.

- Under a $300,000 contract received in January 1981, Special Systems is combining the Euclid programming language compiler and a software verification system for the U.S. Navy. The project will increase the Navy's systems security and reliability, reduce life cycle management costs, and provide a consistent software development and verification environment. The contract is the first phase of a program expected to span five years.

- The SHARP APL interactive programming language is available from Sharp Associates for a monthly license fee of $5,000 to $25,000, depending upon the number of simultaneous user tasks performed. Mainframes with SHARP APL installed can be connected to the I.P. Sharp network via a dedicated IBM 3705.

 - SHARP APL runs on IBM 370 or compatible equipment under a variety of IBM operating systems. There are currently 20 installations.

- Applications available on Sharp's network may be purchased as separate packages by SHARP APL users. Sharp recently announced the following network product:

 - In December 1981, Sharp released SNAP (Sharp APL Network Analysis for Projects), a project planning and control system utilizing the critical path method. SNAP's flexibility allows project managers to address diverse problems and selectively display records. The system interfaces with a drafting facility for the production of computer generated charts. SNAP is available on Sharp's network for $1,000 a month, or may be licensed for $25,000.

INDUSTRY MARKETS

- Sharp estimates its industry segment revenue as follows:

- Discrete manufacturing	20%
- Transportation	15
- Banking and finance	20
- Insurance	15
- Education	10
- Government	5
- Services	15
	100%

©1982 by INPUT. Reproduction Prohibited.

GEOGRAPHIC MARKETS

- The company's 1981 revenue was derived from the following geographic markets:

Canada	32%
Europe	28
United States	32
Australia	5
Asia	3
	100%

- I.P. Sharp has 60 branch offices worldwide. Offices are located in 12 Canadian cities, with international headquarters in Toronto.

 - U.S. headquarters are in Rochester (NY). Additional office locations include Atlanta; Boston; Chicago; Dallas and Houston; Englewood (CO); Los Angeles, Newport Beach, Palo Alto, San Francisco, and Santa Clara (CA); Miami Lakes (FL); White Plains and New York City; Philadelphia; Phoenix; Bellevue (WA); and Washington, D.C.

 - European headquarters are in London, with additional offices in Denmark, Norway, Sweden, Finland, The Netherlands, Belgium, Ireland, the United Kingdom, West Germany, Spain, Italy, France, Austria, and Switzerland.

 - Offices are also located in Australia, Mexico, Singapore, Japan, and Hong Kong.

COMPUTER HARDWARE AND SOFTWARE

- I.P. Sharp maintains the following equipment at its Toronto data center:

 - 1 Amdahl 470/V8, MVS.
 - 1 IBM 3081, MVS.

- More than 80 Computer Automation Alpha LSI-2/20 minicomputers located worldwide act as concentrators in the network.

- The SHARP APL network may be accessed via the worldwide SHARP APL private packet-switched network, supplemented by the Telex network and by public carriers including Datapac (Canada), Tymnet, and Telenet. The network can be accessed in over 500 cities worldwide.

©1982 by INPUT. Reproduction Prohibited.

COMPANY HIGHLIGHT

I.P. SHARP ASSOCIATES
145 King Street West
Toronto, Canada M5H 1J8
(416) 364-5361

Ian Sharp, President
Private Corporation
Total Employees: 470
Total Revenues, Fiscal Year End 12/31/80: $36,000,000

PRINCIPAL BUSINESS Since 1969 I.P. Sharp has provided APL timesharing services.

FINANCIALS

		($ Thousands)				
		12/80	12/79	12/78	12/77	12/76
-	Total revenues	$36,000	$25,000	$19,000	$14,000	$10,000
-	Net income	$ 3,700	$ 1,400	$ 1,200	$ 1,100	$ 350

. Sharp management expects 1981 sales to reach $48 million.

SOURCES OF REVENUE

- 70% Interactive remote computing services.
- 20% Professional services.
- 10% Software products.

PRODUCTS AND SERVICES

- Processing services (Exhibit A).
- Twenty percent of I.P Sharp's revenue is derived from professional services originating from the Special Systems Division.
 . Consulting services are available for the specification and implementation of minicomputer turnkey systems for process control, telecommunications, research and business accounting applications.
 . Other areas covered by I.P. Sharp consultants include: project management; feasibility studies; facilities management; contract programming; minicomputer hardware evaluation and acquisition; design and selection of communications facilities.
- SHARP APL is available for lease from Sharp Associates for $5,000-$25,000/month. If a user is running SHARP APL then additional Sharp applications can be purchased.
 . There are currently 14 installations of SHARP APL with 12 additional sales expected for 1981.
 . SHARP APL is available for a variety of IBM operating systems running on IBM 370 or compatible equipment.

©1981 by INPUT. Reproduction Prohibited.

EXHIBIT A

APPLICATIONS AVAILABLE ON PROCESSING SERVICE

APPLICATION AREA/PRODUCT NAME

- OPERATING SYSTEM(S)
 - AMDAHL 470/V8, MVS
- PROGRAMMING LANGUAGES SUPPORTED
 - APL
- DATA MANAGEMENT SOFTWARE
 - STARS
 - MABRA
- DATA BASES AVAILABLE
 - AVIATION (CIVIL AERONAUTICS BOARD, AIRFRAME AND ENGINE INVENTORY, ORIGIN-DESTINATION, SERVICE SEGMENT INFORMATION, OFFICIAL AIRLINE GUIDE, U.S. INTERNATIONAL TRAVEL STATISTICS, AIR CHARTER INFORMATION, NORTH ATLANTIC TRAFFIC, CANADIAN OPERATING STATISTICS, ICAO TRAFFIC STATISTICS, AIRCRAFT ACCIDENT DATA BASE)
 - ECONOMICS (CANSIM, U.S. CONSUMER PRICE INDEX, U.S. PRODUCER PRICE INDEX, CURRENCY EXCHANGE RATES, INTERNATIONAL FINANCIAL STATISTICS, DRI CAPSULE, U.K. CENTRAL STATISTICS OFFICE, WORLD BANK DEBT TABLES, AUSTRALIAN BUREAU OF STATISTICS, NATIONAL PLANNING ASSOCIATION ECONOMIC DATA)
 - ENERGY (MONTHLY PETROLEUM STATEMENT - DOE, API WEEKLY STATISTICAL BULLETIN, MONTHLY PETROLEUM STATISTICS REPORT - DOE, IMPORTS - DOE, MONTHLY SUPPLY AND DISPOSITION REPORT - DOE, FEDERAL ENERGY DATA SYSTEM, MONTHLY ENERGY REVIEW - DOE, INTERNATIONAL PETROLEUM ANNUAL, QUARTERLY OIL STATISTICS)

APPLICATION AREA/PRODUCT NAME

 - FINANCE (BANK OF CANADA WEEKLY FINANCIAL STATISTICS, CANADIAN CHARTERED BANKS DATA BASE - MONTHLY, QUARTERLY, ANNUAL, F.P. CANADIAN CORPORATE DATA BASE, F.P. SECURITIES, CANADIAN STOCK OPTIONS, U.S. STOCK OPTIONS, EUROCHARTS COMMODITIES, CANADIAN BONDMARKET, TORONTO STOCK EXCHANGE 300 COMPOSITE INDEX, AGRICULTURAL COMMODITIES, MONEY MARKET RATES)
 - OTHER (NATIONAL EMERGENCY EQUIPMENT LOCATOR SYSTEM, ACTUARIAL DATA BASE, CANADIAN DEPARTMENT OF INSURANCE, LEGISTATE)
- BUSINESS/FINANCIAL APPLICATIONS
 - CAPERS
 - FINANCIAL ANALYSIS
 - CONSOL
 - LEASE EVALUATION
- GRAPHICS
 - GRAPHICS
 - SUPERPLOT
- SCIENTIFIC/STATISTICAL
 - HYBRID
 - LINEAR PROGRAMMING
 - MAGIC
 - STATISTICAL ANALYSIS
 - BOX-JENKINS
- OTHER KEY PRODUCTS
 - ACTPAK
 - MAILBOX
 - MAX-PAK
 - X-11
 - SNAP
 - SARTEMS

©1981 by INPUT. Reproduction Prohibited.

INDUSTRY MARKETS

- Sharp estimates its industry segment revenues as follows:

. Discrete manufacturing	20%
. Transportation	15
. Banking and finance	20
. Insurance	15
. Education	10
. Government	5
. Services	15
	100%

GEOGRAPHIC MARKETS Thirty percent of Sharp's revenues come from Canada and 35% from Europe. The remaining 35% stems from the United States.

COMPUTER HARDWARE AND SOFTWARE

- The SHARP APL network may be accessed via the worldwide SHARP APL private network, supplemented by the Telex network and by public carriers including Dataroute (Canada), Tymnet and Telenet. The network can be accessed in over 300 cities worldwide.
- The data center in Toronto has two Amdahl 470/V8s with 8 MB of memory each running under MVS.

©1981 by INPUT. Reproduction Prohibited.

I. P. SHARP ASSOCIATES
145 King Street West
Toronto, Canada M5H 1J8
(416) 364-5361

Ian Sharp, President
Private Corporation
Total Employees: 370
Total Revenues, Fiscal Year End
12/31/78: $20 million

THE COMPANY

- Since its founding in 1964, I. P. Sharp Associates has expanded from a small group of systems consultants to become a multi-national company. In 1969 Sharp Associates began offering APL Timesharing Services, headed by Larry Breed and Roger Moore who were associated with Ken Iverson during IBM's development of APL.

- With 3,000 customers at 600 companies, Sharp Associates currently operates a remote computing network service, markets a modified version of user site hardware, and provides professional consulting services.

- In 1978 revenues reached $20 million, an increase of 33% over 1977's revenues of $15 million. Sharp management expects 1979 sales to reach $27 million which would be a 35% increase.

- The employees of I. P. Sharp Associates are distributed as follows:

-	Marketing	95
-	Customer support	130
-	Computer operations	60
-	Administrative	85
		370

- Sharp management considers Boeing Computer Services Company, Comshare, Ltd., Scientific Time Sharing Corporation, and The Computer Company its major competitors.

KEY PRODUCTS AND SERVICES

- Eighty percent of I. P. Sharp's revenues are derived from interactive remote computing services. The remaining 20% of revenues stem from the Special Systems Division which provides systems consulting.

- I. P. Sharp Associates offers several SHARP APL applications on its network. SHARP APL is an extensive modification of IBM's APL and includes file handling capabilities and 250K workspaces. The applications available include:

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Actuarial Package (ACTPAK): A comprehensive set of utility programs which embodies a standardized linear representation of the international actuarial notation.
- AIDS: A system for the development of planning, forecasting, and control models.
- BOX-JENKINS: A forecasting technique used in the analysis of time series data.
- CAPERS: Comprises a set of programs designed to evaluate capital expenditure projects using the discounted cash flow method.
- CROSSTABULATION: Facilitates the efficient analysis of questionnaires.
- APL Econometric Planning Language (EPLAN): Originally written by IBM, it provides the economic analyst with a method of managing and analyzing time series data.
- FINANCIAL ANALYSIS: A library consisting of more than 40 functions which can be used to solve problems in financial analysis, planning, project analysis, loan management, capital budgeting, depreciation, interest rates, and present and future values.
- GOFER: A simple and flexible system designed to help in the analysis of the profitability of developing gas and oil fields.
- GRAPHICS: A general purpose computer graphics system designed to support line drawings on a variety of terminals. Typical applications include business plotting, floor plan layouts, cartography, animation and mechanical drawings.
- HYBRID: Provides a facility for solving differential equations which combines both analogue and digital computing.
- LINEAR PROGRAMMING: A technique used in areas such as operations research and production planning. This package enables the user to find methods for achieving optimal values for quantitites such as revenue and production volume.
- MABRA: A generalized record administration system that handles records with mixed-type, fixed-length fields.
- MAILBOX: An electronic mail facility which provides a mechanism for communication between people rather than places.
- MARTHA: A proprietary product of M.I.T. which is a set of general purpose programs for analyzing linear electrical networks.
- MAX-PAK: A system used for creating, maintaining and accessing microfilm data bases.
- NETWORK ANALYSIS: A tool which can be used in the efficient planning of projects.
- PLOT: Contains a set of programs which can be used to present numeric results in a variety of graphic forms.
- PORTFOLIO MANAGEMENT: A record keeping system for managing and analyzing investment portfolios for both the retail and institutional investor.
- RISK ANALYSIS: Designed to help quantify the risk element in investment ventures.
- SARTEMS: A text management system which provides facilities for the storage, correction and retrieval of non-numeric data.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- SKILLS INVENTORY: Commonly used by personnel search organizations who wish to place candidates, or by personnel departments of large organizations who track employee skills, locations, and assignments.
- STATISTICAL ANALYSIS: A collection of statistical functions to be used in such areas as data entry and manipulation, parametric and non-parametric statistics, correlation, regression and analysis of variance.
- TEXT EDITOR: A system for entering, correcting and formatting text.
- X-11: Peforms the seasonal adjustment of monthly or quarterly time series according to the X-11 variant of the Census Method II Seasonal Adjustment Program (U.S. Department of Commerce, Bureau of the Census).

- The Sharp timesharing service makes available a number of public data bases which contain economic, demographic, security market and industry related information. Data bases available on the network are:

 - AIRLINES:
 - FORM 41 data base.
 - ORIGIN - DESTINATION data base.
 - ER586 - Service Segment data base.
 - OAG - Official Airline Guide data base.
 - INS - U.S. International Air Travel Statistics data base.
 - T6 - Air Charter data base.
 - Banking:
 - Bank of Canada Weekly financial Statistics.
 - Chartered Banks data base (monthly, quarterly, and annual).
 - Corporations:
 - Fundamental Data Base: data taken from the annual reports of 241 major Canadian corporations.
 - Demography:
 - Census 71 data base.
 - Economics:
 - CANSIM* Mini Base and I. P. Sharp's CANSIM Mini Base Supplement: Contents of the Statistics Canada CANSIM Mini Base which is a large collection of socio-economic time series relating to the internal activities and characteristics of Canada and to its external trade.
 - Consumer Price Indices.
 - CSO Data Base (Central Statistics office).
 - Currency data base.
 - International Monetary Fund.
 - NBER Data Base (National Bureau of Economic Research).
 - Energy:
 - PETROSERIES: Contains data supplied by the U.S. Department of Energy and by the American Petroleum Institute.
 - Environment:
 - NEELS (National Emergency Equipment Locator System).
 - Insurance:
 - Actuarial Data Base.

* CANSIM is the registered Trade Mark for Statistics Canada.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- Securities:
 - Stock Exchange.
 - Canadian Stock Options.

- I. P. Sharp Associates offers a modified version of user site hardware in addition to its timesharing services. SHARP APL is offered as a distributed program product similar to user site hardware except that Sharp does not provide the hardware.
 - A version of the software system, complete with APL language extensions, application packages, and access to the I. P. Sharp communications network can be provided to run under a variety of IBM operating systems.
 - Six systems are currently installed and three additional sales are expected for 1979.

- Twenty percent of I. P. Sharp's revenue are derived from professional services originating from the Special Systems Division.
 - Consulting services are available for the specification and implementation of minicomputer turnkey systems for process control, telecommunications, research, and business accounting applications.
 - Other areas covered by I. P. Sharp consultants include: project management; feasibility studies; facilities management; contract programming; minicomputer hardware evaluation and acquisition; design and selection of communications facilities.

INDUSTRY MARKETS

- I. P. Sharp management estimates its revenues are derived from the following industry segments:

- Discrete manufacturing	20%
- Transportation	15
- Banking and finance	20
- Insurance	15
- Education	10
- Canadian government	5
- Services	15
	100%

GEOGRAPHIC MARKETS

- Thirty-five percent of Sharp's revenues come from Canada and 40% from Europe. The remaining 25% stems from the United States.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

- The company has 45 branch offices in Canada, Europe, Australia, and the United States. The corporate headquarters is located in Toronto which is also the location of I. P. Sharp's only data center.

COMPUTER HARDWARE AND SOFTWARE

- Sharp APL network is accessed via the worldwide TELEX network and supplemented by public carriers including Dataroute (Canada), TYMNET and TELENET. The network can be accessed in over 250 cities worldwide.

- Software for the network was developed by the Special Systems Division. In 1973, Sharp introduced a commercial terminal based packet-switched network which was the first of its kind.

- The data center for the network in Toronto consists of two Amdahl 470/V6-II's with 4MB of memory each, running under DOS.

© 1979 by INPUT, Palo Alto, CA 94303. Reproduction Prohibited.

COMPANY HIGHLIGHT

I. P. SHARP ASSOCIATES
145 King Street West
Toronto, Canada
(416) 364-5361

Ian Sharp, President
Private Company
Total Employees: 250
Total Revenue, fiscal year end 1976: $12 million*

COMPANY BACKGROUND:

- The company was founded in 1964 and was one of the first to offer APL Time Sharing Services.
- The original founding group included Larry Breed and Roger Moore who were associated with Ken Iverson during IBM's development of APL.
- The company had an initial equity interest in Scientific Time Sharing of Washington D.C., and the two shared many of the initial joint development efforts. The equity was subsequently sold.

OVERALL ASSESSMENT:

- The company is one of the major time sharing vendors and it should remain as a viable vendor. They have passed the critical $5 million dollar size and are growing at a rate faster than the industry.
- I. P. Sharp, like others in the APL time sharing industry, is subject to erosion by stand-alone in-house APL machines such as IBM's 5100. However, I. P. Sharp has taken the initiative to survive by moving rapidly towards industry specialization and developing application packages that are industry specific. The use of APL is incidental to these applications and is used because it provides a cheap easy programming medium.
- The company is international in scope. Fortune Five Hundred companies use its services because of the extensive network and unique application programs.

*Estimate by INPUT

KEY PRODUCTS AND SERVICES:

- Approximately 60% of the company's revenues is derived from the sale of APL time sharing service for commercial applications. The APL system is extensively modified and extended from IBM's offering and includes file handling capabilities and 80k work spaces. Prices are competitive with other APL vendors.

- Approximately 20% of I. P. Sharp's revenues are from scientific use of the APL time sharing service.

- The company derives a significant part of its APL revenues from services that depend upon its data bases such as:

 - U. S. Economic Data

 - Canadian oil spill data

 - Aircraft loads and operating data information

- The company derives approximately 20% of its revenues from systems consulting in such specialty areas as:

 - Military

 - In plant information networks

 - Air traffic

- The company has installed six in-house turnkey APL installations for those customers with large time sharing requirements.

APPLICATIONS: Among some of the unique application packages are:

- Seasonal adjustment program for time varying data using the X11 model of Shiskin

- AIDS, a corporate planning program

- Econometric programs

- A comprehensive statistical package of 350 programs

- The IMS inventory planning and control system

COMPANY HIGHLIGHT/I. P. SHARP ASSOCIATES

INDUSTRY MARKETS: Industries supported include: Federal Government, Banking and Finance, and Aerospace.

GEOGRAPHIC MARKETS: The company has 28 offices evenly split between Canada and the U.S. The company also has European offices in England and Holland. Some of the major North American offices are Toronto, Ottawa, Rochester (N.Y), and Los Angeles.

COMPUTER HARDWARE AND SOFTWARE:

- I. P. Sharp has two 360/75's installed with 1.5 million bytes of memory each. Online data storage is 4 1/2 billion bytes. Response time with 150 users is under 2 seconds.

- The company has a dedicated network that covers most of the U.S. and Canada. It is going to hook up to the Telenet service in the spring of 1977.